The Journal of the American Medical Association

Published under the Auspices of the Board of Trustees

VOL. XLI. CHICAGO, ILLINOIS, OCTOBER, 17, 1903. No. 16.

Original Articles.

GASTRIC ULCER;

CLINICAL, PATHOLOGICAL AND SURGICAL PHASES.*

A. H. CORDIER, M.D.

KANSAS CITY, MO.

The invasion of the domain of internal medicine by the modern surgeon has been one meeting no little opposition, as the battle of words in medical societies and articles in journals will attest, yet this onward march of the application of proper surgical principles continues. With true surgical principles applied to internal organs, with actual demonstrations of the results claimed by such procedures by the surgeon, the practitioner is willing to accept these procedures and to recommend them. Only a few years ago pelvic hematocele found a place in every text-book and was treated from a medical standpoint, some cases recovering, but many dying; to-day ectopic gestation with ruptured tube has replaced the hematocele pathology, and proper surgery saves the majority of these cases. Postmortems on cases dead from internal bleeding from ruptured tubes, and surgical operations on the living revealed the true pathology in these cases. The proper management of these cases is understood by every physician and surgeon of to-day.

Nature is a great healer when the conditions are favorable for repair. The whole secret of Nature's reparation of tissues destroyed or injured is embodied in one of nutrition, both bodily and locally, and a physiologic rest of the diseased part. Unfortunately for Nature, there are some parts of the body in which these desired ends can not, in a great measure, be attained. While the stomach is not necessary to life, the being is much better off with than without it. Absolute physiologic rest of this organ is almost if not impossible; thus both the strongholds of persistent pathology are well guarded by impaired bodily nutrition and physiologic activity of the crippled stomach. If an eye is inflamed it is put to rest in a darkened room; if a synovitis exist the joint is immobilized; if there exist an ulcer on the lower extremity, the leg is bandaged and elevated when necessary to give support (physiologic rest) to the crippled returning blood current. If a similar process exist in an internal organ why not apply the same surgical principles for its relief?

Since Billroth's successful pylorectomy in 1881, stomach surgery has advanced rapidly both in perfecting the technic and scope of application. The operations for removal of malignant growths have not been attended by a permanency in their curative results that lends much encouragement, yet the temporary relief obtained has justified this effort at palliation of symptoms and prolongation of life.

In 1881 Wolfler performed the first gastroenterostomy. This operation was devised to relieve cases of malignant and non-malignant stenosis of the pylorus with stomach dilatation, and the results have been all that could be desired in the relief of disagreeable symptoms even where a cure was not possible. The application of this operation to the cure of uncured medicinally-treated cases of gastric ulcer, has more recently been introduced with results that are most satisfactory.

The term ulcer of stomach as applied to this article does not include malignant neoplasms, or the multiple follicular ulceration in tuberculosis of the stomach. The term ulcer does not necessarily imply that there is but one ulcerated spot, as there may be many and yet come within the scope of this article. Of 867 cases reported by one author there were more than one ulcer in 175 of the cases. The acute cases are more likely to be multiple, but of this variety surgery is needed less, save for hemorrhage.

A chronic ulcer of the stomach may be very large or may remain for years a small round ulcer the size of a quarter. The investigations that have been made to determine the location of these ulcers have been so imperfect and haphazard that they are almost valueless. Yet a number of carefully recorded postmortems have shown that certain parts of the stomach are more liable to this disease. On the posterior wall of the lesser curvature near the pylorus is a favorite site for the development of an ulcer. The usual shape of these ulcers is round or oval, yet the large ulcers may assume almost any shape or several may be joined together by an isthmus of healthy mucous membrane. The healing of an annular ulcer may by the cicatrix produce sacculation of the stomach into two or more divisions. Hemorrhage as a symptom is quite prominent at some stages of an ulcer's progress, yet it may be so trivial as not to be of much consequence or value as a diagnostic or operative indicator. On the other hand, hemorrhage from a gastric ulcer is a frequent cause of death. In a large series of fatal cases the postmortems revealed 20 per cent. of death from hemorrhage. This table was based on deaths from chronic cases, as the death rate from hemorrhage in acute cases is very much lower, 5 per cent.

In cirrhosis of the liver ulcers are of rather frequent occurrence, and are prone to bleed, owing to the impeded circulation through the liver. I remember seeing such a case a few years ago. The hemorrhage in this case was terrific. The patient made a recovery and is well to-day, as far as his gastric ulcer is concerned.

* Read at the Fifty fourth Annual Session of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. Palmer Dudley, H. P. Newman and J. H. Carstens.

As an ulcer (chronic) approaches the peritoneum it forms adhesions to surrounding organs. The pancreas is most frequently involved owing to the ulcer being on the posterior wall. This mass of adhesions at the time of operation is liable to lead the surgeon into an error in diagnosing the condition as cancer, especially when the omentum is involved. Such was my experience in one case. This effort on the part of Nature to prevent first, perforations into the general peritoneal cavity, and second, to limit local suppuration in case such takes place. The conservative efforts of Nature are often detrimental by obstructive symptoms, and may prevent ulcers healing. The efforts on the part of Nature to limit the pathology occasionally result in a fatal hemorrhage from adjacent vascular organs. Peritonitis may extend over a large area of stomach without perforation, thus limiting movements of the organ and causing contraction of its walls. Delays permit large ulcers to form. Large cicatrices interfere with the functions of the organ, are prone to break down into ulcers again, or to become malignant. A portion of a stomach becoming fixed by adhesions to the liver limits the peristaltic movement and permits the food to remain in the lower segment of the organ; fermentation results, and dilation is inevitable. It is not necessary that the pylorus be constricted in every case of gastrectasis. All are agreed as to the management of these cases.

On first thought one would naturally think that nearly all those cases of extensive chronic ulcers would in their progress divide vessels that would quickly bleed the patient to death, but when we recall the inflammatory changes that have taken place in the surrounding structures and the power of the muscular contractions on the vessels when this change is not complete, it is then easily understood how Nature so frequently checks the bleeding in this locality. There is no way of telling in advance as to how well Nature has fortified against such an attack. The deeper the ulcer the larger the blood vessel injured and the more profuse the bleeding, as a rule. Nature anticipates the dangers of a threatened perforation in many cases by agglutinating some structure or organ to the visceral peritoneum overlying the seat of threatened invasion. If this effort is not successful the contents of the stomach are spilled into the general peritoneal cavity, resulting in death quickly. If success attends this effort a localized abscess may result, or fatal hemorrhage may be induced at time of perforation; especially is this true if the pancreas, liver or spleen should be the organ adhered. The most frequent site of the perforation has been variously located by different observers, the consensus of opinion placing the majority of perforations in the anterior wall of the stomach, which is contrary to the location of the majority of ulcers. When we recall that many cases may perforate in the posterior wall and not be diagnosed owing to the frequency of the limiting inflammatory process protecting the general peritoneum, we can then see how uncertain this theory is. The anterior perforations are the fatal ones, hence postmortem verifications are more frequent. This disease is four or five times as prevalent in women as in men, but the mortality of the latter is much greater than the former. While the general belief has been that this is a disease especially liable to attack young girls, the statistics of some authors rather disprove this theory, showing gastric ulcer occurring most frequently at the age of twenty-five. Simple ulcer is rare before puberty.

As a rule, the ingestion of food produces pain in the cases where there is a freedom from suffering when the stomach is empty, and in those cases where there is persistent discomfort the pain is increased by taking food into the organ. Solid or coarse food is more liable to produce pain. Milk and all mucilaginous drinks, as a rule, rather relieve the pain, in this respect differing from the usual effects of milk in the non-organic conditions. A patient may complain of a pain in the epigastrium over a large area, yet the tenderness may be confined to a small spot.

During menstruation, when the abdominal organs are physiologically congested, the pain in gastric ulcer is increased, and the tenderness is more marked. It has been noticed that the vomiting of blood is most likely to take place and to be more profuse at this period. Vomiting as a symptom is not of as frequent occurrence as is generally supposed, yet in many cases it is the one symptom above all others to be met by treatment. A feature to be remembered about the vomiting is that it is not usually accompanied by nausea, and the vomiting does not require much effort. This vomiting usually takes place in about fifteen minutes to two hours after taking food. The vomitus usually contains an excess of hydrochloric acid. Where there are adhesions to surrounding organs in the region of the pylorus, vomiting may occur at any time of the day or night, regardless of the ingestion of food.

Where there is a catarrhal condition of the whole mucous membrane in these cases the vomiting is more persistent, comes on earlier and is accompanied by more nausea. While the vomiting is Nature's remedy to rid the stomach of the pain-producing foreign substances it at the same time is a dangerous complication, leading to starvation, hemorrhage and rupture of the ulcer. The bleeding in these cases varies from a few undetected drops to a fatal ending. Hematemesis occurs in probably 75 per cent. of all cases, yet an ulcer may be slowly forming for years without giving rise to a perceptible hemorrhage. A hearty meal, a meal of solid food or a gaseous distention may be the exciting cause of an alarming hemorrhage.

In the long-standing cases of pyloric ulcer the vomiting and pain are more persistent, and usually last until a fatal termination is reached. When the ulcer or cicatrix is near the pylorus, the stomach is more liable to be dilated, and parts of its contents remain to become decomposed into a sour, stinking, poisonous fluid. The repeated hemorrhages leave the sufferer with impaired digestion, less recuperative powers, and profoundly anemic—all complications against a successful recovery of the patient.

The dignity of a gastric ulcer is much depreciated by thinking or speaking of it as an abrasion of the mucous membrane of the stomach giving rise to a small painful spot felt in front and behind, with occasional vomiting of blood, these trivials to be relieved by subnitrate of bismuth, nitrate of silver, etc. About 10 per cent. of all gastric cancers have their origin in a benign ulcer (Lebert). If we accept this statement as true we then have a strong argument in favor of resorting to any procedure for the early cure of all benign ulcers of the stomach. Prophylaxis is the keynote of the successful treatment of this incurable disease, when once inaugurated.

CASE 1.—Mrs. P., age 43. Mother of three children. Housewife. American. Three years ago this woman began having dyspeptic symptoms and especially pain after eating. A year afterward she began vomiting soon after meals, from the fact that vomiting gave temporary relief from the pain. The pain usually began a half hour after eating and would last for

three or four hours, or until the stomach was emptied by free emesis. The vomiting at first was only after eating, but within a few months it would come on at any time, and usually nothing but a quantity of ropy mucus was thrown up. She would vomit as many as a dozen times a day. Her nourishment the first six months was good. For the whole time of her illness she had a pain in the epigastrium, the area of same being half the size of the hand, and exactly in the center of the body. This pain has been transmitted posteriorly. Tenderness on pressure has been a marked symptom from the beginning of her illness. For the last six months she has been vomiting considerable blood each day, and recently has had some severe hemorrhages; a quart at one time being the most. At the time I saw her she was vomiting repeatedly during the day and night, and an abundance of blood was present each day. She was much emaciated, and her facial expression was one of pain and "tired-of-life" character. She had a scaphoid abdomen, with hard abdominal muscles. Tenderness on pressure in the hypogastrium was well marked. The stomach was not dilated, in fact, appeared contracted, as the stomach resonance was diminished on percussion.

A diagnosis of malignant ulcer of the pyloric end of the stomach was made and an operation advised for its relief: the procedure advised being a gastrojejunostomy. This operation was performed, using a large-sized Murphy button. The lowest portion of the anterior wall of the stomach was selected as the site for the anastomosis to a coil of jejunum fifteen inches below the pylorus. At the time of the operation an ulcer two or more inches in diameter could be made out in the posterior and upper border of the stomach near the pylorus. Some adhesions to the under surface of the liver could be defined. Her recovery from the immediate effect of the operation was rapid. She did not vomit for two or three days, when she had two slight vomiting spells. At the end of the third day she was taking liquid nourishment, relishing the same and retaining it. In a few more days she was taking solid food, in the way of steak, eggs, etc. During her three weeks' stay in the hospital she did not vomit a dozen times, while before her operation she vomited a dozen or more times daily. Her bowels became regular, her facial expression was completely changed, and her bodily nourishment was materially improved in that time. She passed the button six weeks after the operation. It is now ten weeks since the operation and the physician, Dr. Huffman of Columbus, Kans., writes me: "She is doing well; is able to walk to town, a distance of three-quarters of a mile. She complains of a slight nausea at times, but it is growing less. I think you have had an excellent result and she is well pleased."

Case 2.—Mr. C., age 38, eighteen years ago began having digestive trouble. It was noticed at that time that solid particles of food in the stomach gave rise to more or less pain. A year or so later vomiting began as a symptom. This vomiting was usually produced by the presence of food in the stomach. After the stomach was emptied the pain would cease, and the patient would be fairly comfortable until after another meal. On one or two occasions he had quite a perceptible show of fresh blood in the vomited material. This painful condition continued up to the time of my first examination. In addition to the above history I learned from the patient that large quantities of material would be thrown up that had been retained in the stomach for two or three days. As much as twelve or fourteen pounds of strongly acid, offensive material would be thrown up from the stomach at one time. This usually brought some relief, but even when the stomach was emptied of its solid contents gaseous distention would go on, producing great distress from the pressure of the enormously dilated stomach. Cardiac and pulmonary dyspnea was a very prominent symptom as a result of this pressure against the diaphragm.

He had lost very much in weight at the time I saw him, and weighed only 115 pounds, was taking 20 grains of morphin a day and was in a desperate condition in every sense of the word. My examination revealed an enormously dilated stomach and a very much emaciated patient. There was no tenderness on pressure at any spot over the abdomen; no enlargement or induration could be detected through the thinned abdominal walls. A diagnosis of pyloric obstruction resulting from the healing of a non-malignant ulcer was made. An operation having in view the establishing of a free communication between the stomach and the lower alimentary tract was advised and accepted. It was noticed in the examination that the pylorus was very low and unusually far to the right of the median line. For this reason, at the time of the operation, the incision was made in the right semilunaris, believing that it would give the nearest approach to the most dependent portion of the dilated organ. The correctness of this decision was verified at the operation. I found on opening the abdomen the stomach very much dilated, but in position, as before described. Believing, as I do, that all of these operations should be primarily drainage procedures, the anastomosis was made nearer the pyloric end of the stomach than that usually advised or found necessary. The incision in the stomach was made in its anterior wall, about four inches from the pylorus. A coil of the jejunum 15 or 18 inches below the pylorus was selected as the suitable site for the incision in this portion of the canal. The usual precautions were used in the application of the sutures in the use of the Murphy button.

Fig. 1.—Gastrojejunostomy. Pyloric stricture (S) from healed gastric ulcer. Pyloric end of stomach displaced downward, hence the location of anastomosis (A).

The operation was quickly performed and the patient returned to bed in good condition. Following the operation there was no unpleasant symptom. In a few days he was able to take the necessary nourishment without any inconvenience or pain following its ingestion. The morphin was withdrawn from him, and at the end of three weeks he was not only broken of his morphin habit, but was able to return to his home, taking both liquid and solid nourishment with perfect comfort. He continued to improve until his former good health and weight were regained. He increased in weight until he weighed 180 pounds and was strong and able to do any work that was necessary for him to do. His digestion was perfect and free from pain; the gaseous distention disappeared and the stomach seemingly regained its natural size and tonicity. He continued in this state of health for six and one-half years. He was then taken with acute pneumonia, and within two weeks died as a result of this attack.

I was fortunate in being able to make a postmortem in this case. On examining the stomach I found that there was a complete obstruction of the pylorus (Fig. 1): that the stomach had regained its former size; that its muscles were well developed and in a healthy condition; that the portion of the duodenum and jejunum above the point of anastomosis, while in a healthy condition, showed well-marked evidence of atrophy from disuse. At the site of the anastomosis there was absolutely no omental or other adhesions except those made by the union of the bowel to the stomach. The opening from the stomach into the lower segment of the bowel was as large, seemingly, as at the time of the operation. There appeared to be a species of valvular action that prevented the contents of the stomach from going into the upper coil of the bowel. A similar arrangement seemed to exist preventing the bile from going into the stomach. On filling the stomach with air or water not one drop or bubble could be forced through the pylorus. The water would enter the lower segment of the bowel with perfect ease, but none at all would go into the upper segment until after the stomach and lower segment of the bowel were thoroughly distended.

As remarkable as it might seem, the Murphy button, instead of passing into the intestine and finding its way out into the external world, as is usual, had dropped into the stomach and remained there for nearly seven years, or until the time of his death. Its presence in the stomach had never given rise to a single symptom. One end of the button was very much destroyed, presumably by the secretions of the stomach.

The accompanying illustrations show very distinctly the strictured condition of the pylorus, also the perfect anastomosis between the bowel and the stomach. It also shows the distended condition of the stomach and the lower segment of the bowel with very little distention of that portion of the intestine above the site of the anastomosis.

While the dropping back of the button into the stomach might be used by some as an argument against its use, this objection would certainly lose its force from the fact that not a symptom was produced by its presence, and also from the fact that the time of performing the operation is very much shortened, a no small item in many of these cases. The greatest of all in favor of the button is the fact that nearly every one of these cases recover from the operation if the work is properly done.

This case illustrates a condition following the healing of a gastric ulcer, the scar causing pyloric stricture.

CASE 3.—Mr. S., age 48. Twenty-five years ago this man had quite a severe hematemesis. This was followed by a long period of gastric pain and uneasiness after eating, with occasional vomiting spells. These symptoms troubled him for a number of years, then for several years he was comparatively healthy. About two years ago he began having a burning in his stomach after eating, with an occasional eructation of a sour, foul-smelling liquid. He was troubled from gaseous distention of the stomach and bowels. Constipation was a marked feature. Soon occasional vomiting attacks were noticed and he began losing flesh. He became very much emaciated and cachectic in appearance. He had a long course in gastric lavage and dieting, with no improvement in his general condition. One year ago he left his business (wholesale merchant) and spent several months in the south. During his stay there he gained in flesh, and on his return resumed his former business; but he was soon compelled to stop on account of his old symptoms, returning. He lost thirty-six pounds in five months.

I find on examining him that he is very anemic and much emaciated, with a look of care and uneasiness depicted on his face. I find the tongue coated brown and the breath very offensive. (This has been a feature of his case for several months.) The lower portion of the abdomen is flat and the muscles tense and dry. No gases in the intestines. Stomach distended with gas two inches below the umbilicus. Sense of resistance and pain on pressure in the region of the pylorus. No tumor discernible; vomiting several times each day. No solid food tolerated by the stomach, and practically all liquids rejected after remaining in the stomach for a few hours. Coffee-grounds-looking material is vomited often. A test meal showed: Total acidity, 20; reaction faintly acid; free acid, 0; HCl, 0; lactic acid, small amount. The examination by Dr. Wolf four weeks after operation showed: Total acidity, 75; reaction strongly acid; free acid, 0; HCl, 0.

A diagnosis of probable non-malignant partial stenosis of pylorus was made, resulting in dilatation of the stomach.

The early history of this case was one of gastric ulceration, later a healing of the ulcer, then a reformation of a benign or malignant ulcer at the site of the old scar, with a pyloric stenosis and gastrectasis. Operation was performed on the anterior wall of the stomach at the most dependent point.

Eight years ago I laid stress on the importance of making the opening in the stomach in a position that would act as a drainage opening (Figs. 2 and 3). This case since the operation has been one of continued comfort and improvement. He is taking an abundance of food, and is gaining strength and weight. He has not vomited a single time since the operation; neither has it been necessary to wash the stomach, this being required twice a day before the operation.

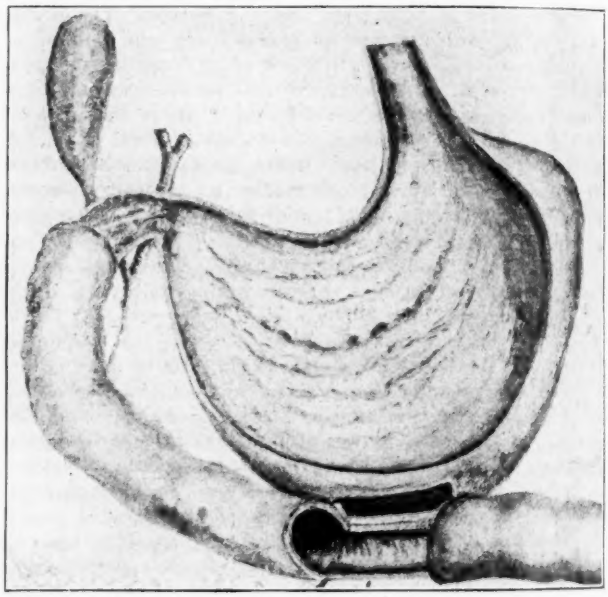

Fig. 2.—Showing that opening should be made in bottom of stomach.

The medical management of 50 per cent. of these cases is quite satisfactory, but I know of no class of cases requiring more patience on the part of the physician, and more faithfulness on the part of the patient in carrying out the instructions.

There is a class of cases where either from want of favorable surroundings or for want of persistent assistance from the patient the medical management of these cases is a total failure. There is yet another class of cases in which, regardless of all faithfully tried remedies, the disease goes on year in and year out, with no indications of a permanent recovery; while there are a class that from the dangerous symptoms induced require some line of management more certain and rapid than the slow expectant treatment usually carried out. For instance: Starvation, severe pain, persistent vomiting and alarming recurring hemorrhages. Of the medical management I will have very little to say in this article, but confine my remarks to the management of this class

where a fair trial of that line of management has been given and failed.

The excision of a gastric ulcer, would, on first thought, appeal to one as the ideal method of dealing with such cases, but when we take into consideration the difficulty of defining the limit of the ulcer, the lowered vitality of scar tissue in its efforts to unite, the extensive adhesions of the bottom of the ulcer to surrounding viscera, and the dangers of hemorrhage and injury to other organs in separating these adhesions, we then can understand why the mortality is so very high in excision of a gastric ulcer. The prime object to be sought in the healing of a gastric ulcer is to maintain the health standard by proper nutrition, removing all sources of irritation possible, giving the parts rest. How are these ends best obtained? In the rebellious cases where the uncertain nutrient enemas can not be carried on for the proper time, and where the liquid diet will not be adhered to, where there is persistent pain, alarming hemorrhages,

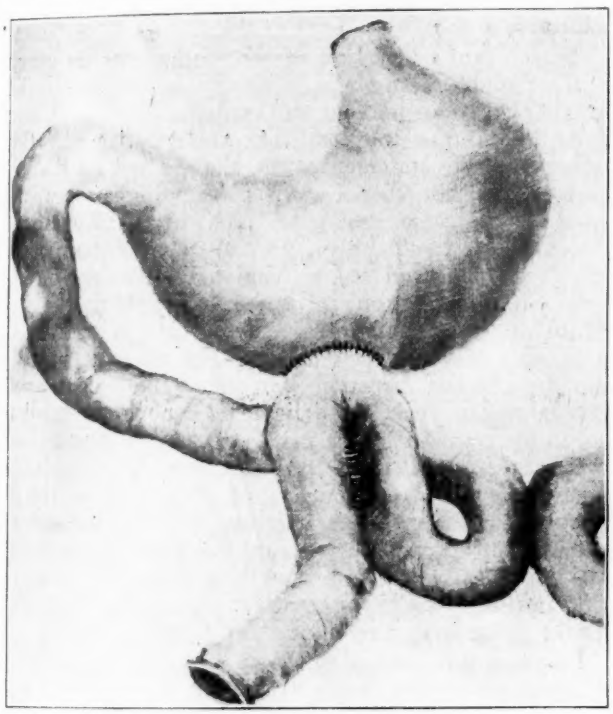

Fig. 3.—It is not necessary to do multiple operations.

or where the patient is so situated that he or she can not afford to wait on the slow, uncertain, hard to carry out, and expensive medicinal method, there the case becomes a strictly surgical one. A gastroenterostomy fulfills or meets most of the indications in such cases. By selecting a site for the anastomosis in the most dependent portion of the stomach, the organ will empty itself by gravity as soon as any food enters it; thus getting rid of this source of mechanical irritation. At the same time the strongly acid secretions of the stomach are drained into the intestines and away from the ulcer. If efforts at vomiting should occur the stomach empties itself into the bowel through the non-valvular opening, and thus the nourishment of the body is maintained and the proper healing augmented by an increase of the reconstructive systemic powers. The motility of the diseased organ is best limited by this procedure and the ulcer permitted to have rest, so necessary in the healing of an ulcer, regardless of its location. The putrefaction of the retained food in the cases with a gastrectasis is prevented and the distention of the organ from the gases averted, thus permitting a contraction of the edge of the ulcer, and preventing the tension of the same that may lead to increased pain or a hemorrhage.

The mortality in a gastroenterostomy is very low in skilled hands, and the relief of symptoms and cure of the ulcer is to be expected in the great majority of cases.

DISCUSSION.

Dr. J. H. Carstens, Detroit—I endorse what the essayist says and to add that in these cases of pyloric obstruction from other cause, where there seems to be a simple contraction, operative correction is simple, but I do not believe that I would put in a Murphy button and leave it there for six years. I use the McGraw ligature, which is simple and can be inserted quickly, and there need be no fear of brass poisoning.

Dr. John G. Clark, Philadelphia—Two points occur to me: 1. How long shall these cases remain under medical care before being subjected to surgical interference? 2. How shall one best and most quickly locate the ulcer? Because a considerable proportion of cases of gastric ulcer will heal spontaneously under careful medical treatment, precipitate operation is unwise. Only after the case has been carefully treated for a sufficient time to determine its chronicity, or when urgent symptoms, such as peritonitis or excessive hemorrhage, occur is it wise to operate. In several instances I have advised a waiting policy, even when the symptoms were rather exaggerated, and thus far I have had no occasion to regret this course. When, however, through its chronicity, or, as said above, through threatening symptoms, the patient's life is seriously jeopardized, an operation should be performed. The second question then comes up for consideration, how best to find the ulcer? Unless the pathologic process is chronic, associated with induration and superficial evidences of inflammation, it may be difficult or impossible to locate by palpation the exact site of the ulcer. Again, if the ulcer is situated on the posterior aspect of the stomach, adhesions may have taken place, making it difficult or impossible without great danger of dislocating the stomach, to bring it into the field of operation. It is, therefore, wise in these cases not to lose time in searching in this more or less haphazard and superficial way, but to make an immediate exploratory gastrotomy. The less vascularized portion in the anterior wall of the stomach, situated between the lesser and greater curvature, should be selected as the site for this exploratory incision. When the incision is made it need not necessarily be a large one. Not only may the stomach be efficiently palpated, but actually inspected. A small speculum or tractor may be inserted into the incision, and in one instance I was able to locate the ulcer with a small electric light. When the ulcer is located in the posterior wall and is bound down by adhesions, it is not wise to break up these adhesions, for the edges of the ulcer may be sufficiently pared and sutured directly through the incision. This is by all means the safest method, and is in direct accord with the method of suturing described by Connell.

Dr. C. O. Thienhaus, Milwaukee, Wis.—When one of the larger arteries of the stomach is eroded by the ulcer, the hemorrhage is usually so severe that the patient succumbs before there is a chance for operation. In regard to other cases of acute hemorrhage I would warn against immediate operation. One may observe patients with severe hemorrhage and anemic to such a degree that one believes nothing but surgical interference can save his life, but usually the patient recovers by proper internal treatment, while operation is extremely dangerous and the mortality, as statistics show, enormously high. For this class of cases, as well as for hemorrhage from typhoid ulcer, I highly recommend gelatin, either by mouth or rectum. I would not like to go on record as claiming gelatin to be a panacea for internal hemorrhages; but, as above cited, it is of great value and ought to be given a trial before taking the responsibility of operating in the acute stage of hemorrhage. I would like to ask Dr. Cordier whether, when he uses the Murphy button, he makes use of the generally employed purse-string suture, or does he, after having made the smallest incision possible and having inserted the button,

use only one suture in each corner of the transverse incision, a method which has been highly recommended lately. In regard to pylorectomy versus gastroenterostomy in cases of ulcer of the pylorus, when the patient is over 40 and has been suffering for a long time from a chronic ulcer in this region, I always prefer if possible pylorectomy because many of these chronic ulcers about this age show a tendency toward malignancy and the differential diagnosis is sometimes extremely difficult even during operation, whether the ulcer is still benign or malignant.

DR. F. F. LAWRENCE, Columbus, Ohio—Too little attention has been paid to the point that there is a stage of acute danger in gastric ulcer—the danger of perforation. If there be one condition more than another in which abdominal surgeons should urge the abandonment of medical treatment and the institution of more radical measures, the closing up of the lacerated surface, it is that of gastric ulcer.

DR. CORDIER—I would not advise, in the majority of instances, to operate during the hemorrhage. In fact, you rarely see one of these cases during an alarming hemorrhage. It is remarkable how cases seemingly nearly bleed to death and then recover. These cases are desperate and the thing to do is to operate and to operate quickly. An operation extending over thirty or forty minutes will prove fatal in the majority of cases. My preference is the Murphy button; the establishment of an anastomosis and doing it quickly, using a purse-string suture, completing the operation in fifteen minutes. I use the button in the anterior wall. Many have recommended opening into the posterior wall, but this is not necessary. It makes the work look bulky and as if done by a tyro. The main thing is to make these operations drainage operations; make the opening in the bottom of the stomach, or otherwise you will have the accumulation and decomposition of food and a renewal of the old symptoms. If you make the opening in the bottom of the stomach the food passes right through. The patients can not vomit, and if they do the vomit goes through the intestine and not up through the esophagus.

HYGIENE OF YOUNG GIRLS.*

J. H. CARSTENS, M.D.
DETROIT.

The hygiene of young girls has been discussed and written about so much that it is utterly impossible for me to say anything new or even to present the subject at a little different angle than you have looked at it before.

When I speak of young girls I naturally mean during the age of puberty. We can divide the subject into mental and physical. The hygiene of the body is comparatively easy if the young girls are raised in a primitive state of civilization. Still, again, here there is a great difference. In some of the primitive races, as with certain tribes of Indians, girls have to do hard work, and do not grow up unrestrained as they do among some other primitive people. In the South Pacific islands, for instance, where they grow up without care and restraint, romping, playing, swimming, there they develop even muscular figures and healthy bodies.

This we can not do in civilized communities. As they grow up, some of the children in Europe, for instance, are obliged to carry heavy burdens and do hard work with poor food. They may be muscular, strong and have large bones, but they do not have handsome and graceful figures nor the intellectual training which we desire.

You take, however, our own so-called better class, who have chances for physical development. In New England, where everything is esthetic and where the mental training is beyond the brain capacity, we find just as lamentable a state of affairs in another direction, yes, even worse than we do with the overworked peasantry of Europe.

What modern civilization desires is an even development of the body and mind. This is a very difficult problem, as we have to contend with a long train of ancestors and their hereditary defects in one direction or another. It is not necessary for me to go into the old question of heredity in its relation to rheumatism, gout, tumors, tuberculosis, and so on. I want especially to dwell on the hereditary predisposition of the nervous system. Insanity, alcoholism, epilepsy, and the like, I need hardly dwell on them, as they are so well known. When, however, we have to deal with that condition we call neurasthenia and hysteria, it is very difficult. Naturally, as a rule, it is the mother who transmits this, and by her lack of mental balance strengthens and intensifies this condition in her daughter, and if the father is also weak and soft, and permits and encourages this state of affairs, it is a very difficult thing indeed for us to manage such cases.

The constant suggestion of the mother has its effect on the daughter, and she is finally imbued with the thought that she is nervous and can not help it. All our efforts to improve the condition are negatived by the mother with the statement, "Oh, she can not do that, I never could either when I was her age. She is too weak, my nerves were too weak also," and so on. We might just as well give up unless we can get the young girl away from home and put her under different surroundings. She must be entirely taken away from the influence of the mother and have the care of a trained nurse, who will teach her and who, by constant suggestions in another direction, can show that she is not nervous, not so weak and delicate as her mother thinks. And in the course of a few years a wonderful change can take place. Again, there is the mother who constantly suggests, month after month, that there must be something the matter with her daughter, with her menstrual function, until it is impressed on the young girl's mind that there really is some trouble, and she will always think in the future that her pelvic organs are weak. So I could go on with numerous other points.

If we now turn and go to the opposite extreme, among the poor and poverty-stricken, we find that children are made to work very hard, to carry burdens, to lift their little brothers and sisters, perhaps have improper food, and thus often produce injuries of all kinds, rupture, curvatures, chlorosis, etc.

Ignorance on the part of the mother is very frequently the trouble. In all these cases it is the mother that must be treated. We must get her to understand that we must reform her, and show her how to properly treat, manage and train the daughter so she will grow up strong and healthy. And in nearly all cases with the right kind of argument and teaching we can get the mother's mind so stirred up that we will have comparatively little trouble in managing these cases properly.

This class of young girls must often work at quite an early age, and we should regulate the kind of work that each one is capable of doing. Fortunately a great deal is being done by the state in the enactment of laws regulating the lines of work. These kind of laws should be encouraged, as they tend to improve the health of the young girls. First, in regulating the hours of labor. Secondly, proper ventilation. Thirdly, in proper toilet facilities. Fourth, in the opportunity of getting food at proper intervals.

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This brings us to the question of physiology. In all these cases, rich or poor, we must regulate diet above all other things. Medication also sometimes will be required, but comparatively little. The various gymnastic sports should be encouraged, but regulated by the physician. This is the only way we are able to reach some people and make them take the necessary exercises. The one trouble with most of these are that they are lopsided, will develop only certain parts of certain muscles and parts of the body, while it is so essential to have a systematic and symmetrical development of the body. We are not always able to reach our ideals with stubborn and selfish patients, but we must do the best we can and always strive for it.

Trying, therefore, to guide the young girl to strong and vigorous motherhood, it is not necessary to pay any attention to the menstrual function. That will come without trouble unless there are organic defects and changes which will have to be looked after and remedied, but that does not concern us here.

If we now consider the mental development we have the greatest difficulty. If their physical weaknesses are marked, the mental training should cease or be checked. In this we will have comparatively little trouble. The rich will be willing to do so because they seem nearly always anxious to stop their studies or postpone them on the slightest provocation. This holds good especially with the so-called shoddy. With the poor and the middle classes we shall have out greatest trouble. If the young girl has been animated by ambition to be something in the future, to be able to support herself, and perhaps often to assist her parents and younger brothers or sisters, we will have a very difficult task if such a person is physically weak. If we allow her to go on with her mental work her physical condition will probably become still worse. She is liable to have an undeveloped uterus and conditions of the system produced by it; poorly developed lungs, weak heart and arteries, flabby muscles, feeble digestion, malnutrition of the nervous system and final collapse. The latter sometimes they will become when the goal is reached for which they struggle: the diploma, the teacher's certificate or whatever it may be. She has a mind educated for requirements of that position, and a body feeble and weak, and if she marries she will be a burden to the poor husband, in fact ultimately will probably be divorced or a subject to a series of operations, which will be done to remedy her defects.

One of the greatest difficulties is that these people learn with difficulty. They have not the right kind of brains; they have to study hard until late at night to get their lessons. This intensifies and hastens the physical downfall. Such persons should stop mental work for a year or two and do some other kind of work. When the body is more developed they can resume their mental efforts. They often object to this, but we can manage them all right if we insist on it. People with the right kind of brains and quick perception can continue studies and with a proper amount of physical training they will get along all right.

The question of age in all these cases cuts no figure in my opinion. Either mentally or physically some girls are further advanced at 12 than others at 18.

In conclusion, let me say that hygiene of young girls is one of the most difficult problems for the gynecologist to solve. There are no mathematical problems, no rule that is even elastic within a certain limit, but every case almost is absolutely distinct and requires to be studied by itself. The hereditary predisposition, the surroundings, the future course, the position in life, the means at their disposition, the development of the different parts of the body, or the lack of development of certain parts, the assimilation and elimination of the various organs, the brain and the kind of brain, how it should be developed in one direction or another, and a thousand and one things must be considered in each individual case. Added to this there must be that fine tact and that absolute control over individuals, so that we can not only manage the young patient, but also those around her, be it the mother, father, sister, cousin or aunt. We must get them all under our control ere we can expect to accomplish anything.

We are able to teach the students but very little. We can give them a few hints, but the cases are so diverse and complicated that every medical man must work out each case for himself.

PELVIC DISEASES IN YOUNG GIRLS.*

FLORUS F. LAWRENCE, M.D., D.Sc., LL.D.

Clinical Lecturer, Diseases of Women and Abdominal Surgery, Starling Medical College; Chief of Staff and Surgeon to Lawrence Hospital for Women; ex-President Central Ohio Medical Society; ex-Secretary Section on Obstetrics and Diseases of Women, American Medical Association.

COLUMBUS, OHIO.

The popular prejudice against examination of the genital and pelvic structures in young girls is not confined to the laity, but, unfortunately, exists in the minds of many of the medical profession. There can be no question that on this altar of prejudice many otherwise useful lives have been sacrificed. The voice of this Section raised in protest will bring fruitage in healthier women, happier wives and more devoted mothers.

First.—The young have, with those older, an equal right to relief from suffering and an equal right to protection from diseases which destroy their usefulness and may endanger life.

Second.—Many, if not all, diseases of the pelvic structures are, in their incipiency, curable without recourse to operations which sacrifice important organs or parts.

Third.—Delay in recognition of, or correction of even the simpler conditions, such as displacement of the uterus or ovaries, may, and too often does, result in such organic change as permanently to destroy all function and render the patient an invalid, forever sterile.

Fourth.—The symptoms, pelvic pain, menstrual pain, menstrual irregularity, neurotic explosions, digestive disturbances, etc., occurring preceding, during or following the menstrual effort are only warnings and strong hints for us to seek the cause.

Fifth.—That the pelvic conditions of the young girl can be discovered by feeling the pulse, examining the tongue, and looking wise is no more true than it is in older persons.

Sixth.—A certain amount of modesty and respect for traditional sentiment is probably a protection to the sacredness of woman's chastity, but a chaste life is no way incompatible with an honest purpose in dealing with diseased conditions, and no man will, by an honest, clean, manly effort to discover the cause of suffering, excite impure or degrading thoughts.

Seventh.—We must remember that not only the physical, but the social, the domestic, and even the moral, life of the patient is involved in this question. She may, because of our neglect to ascertain the condition,

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be rendered hopelessly sterile, and, consequently, that unhappiest of human beings, a childless wife.

Eighth.—Our first duty, then, should be the protection of the physical temple of those entrusted to our care. A sound physical organism is, I take it, the surest protection against moral degradation.

Symptomatology is sometimes very misleading, inasmuch as the entire history and symptom-complex, as gathered from patient or her mother, direct attention entirely to the nervous system, circulatory system, or digestive tract with the single exception that the disturbances develop at or about the time of puberty.

The most common and probably the most important of the symptoms presented, when rightly interpreted, is menstrual pain. Menstrual pain is not a disease, and should never be so considered. It is but a symptom. It probably is never a condition which has not a definite pathologic cause. These causes may be:

- Pelvic
  - 1. Uterine
    - a, Displacements.
    - b, Infantile uterus.
    - c, Metritis.
    - d, Uterine fibroids.
  - 2. Intrauterine
    - a, Endometritis.
    - b, Uterine polypus.
    - c, Submucous fibroid.
  - 3. Ovarian
    - a, Chronic ovaritis.
    - b, Prolapse of ovary.
  - 4. Tubal
    - a, Septic salpingitis.
    - b, Catarrhal salpingitis.
- Extrapelvic
  - Neurasthenia.
  - Anemia.
  - Chlorosis.

I have offered this arrangement of the causes of menstrual pain because I believe the older classification of obstructive, neuralgic, ovarian, tubal and membranous dysmenorrhea has too much tendency to mark this symptom as an entity and thus prevent the proper study of its cause. Many cases in which the pain is agonizing present absolutely normal pelves. These are the cases in which everything depends on care and patience, and they are of such import as to merit consideration apart from those which have a pelvic cause.

Of the pelvic causes, first, displacement, *per se,* is of the least import. A displacement of the uterus does not in itself give rise to menstrual pain, the old theory of obstruction being untenable.

The pain in these cases is due to the resulting inflammation of the uterus, tubes or ovaries; or if it be an old displacement we may have adhesions. The cure of these depends, of course, on the correction or removal of the pathologic lesion causing it, as, in fact, it will in all cases; but I would emphasize that the displacement, while a primary, is the smallest factor in the case.

In the infantile uterus the entire effort at preparation of the mucosa for fecundation and menstruation is abortive. In many cases menstruation never occurs, or, when it does occur, it is not a free or natural effort. It is an attempt on the part of Nature to prepare an organ for a function to the fulfillment of which it is totally inadequate. First, the mucosa is only partially developed; second, the stroma of the deeper layer of the mucosa and that of the superficial layer are one, and in almost embryonic condition. The only cure is to be found in such measures as will develop the uterus (an almost hopeless undertaking except the girl marry and become pregnant) or in the removal of the tubes and ovaries.

In metritis we have a prolific cause. The explanation is, first, irritation of uterine ganglia causing expulsive contractions; second, pressure on pelvic vessels in the deeper portion of the mucosa, which prevents leucocytes reaching the superficial portion, retards the amyloid degeneration in superficial mucosa, and results in more or less destruction of mucosa. This I believe to be the true cause of that distressing condition known as membranous dysmenorrhea, only in these cases the results are all extreme. In endometritis we have predominating a glandular inflammation; the glands enlarge, crowd each other, press the superficial layer into a smaller space, obstruct the superficial capillaries and retard amyloid or hyaline degeneration; the capillaries in the stroma become congested, rupture, pour out their blood, form lacunæ, and literally tear the epithelium from its moorings. This is probably the condition in which the older writers thought there was some obstruction in the cervix, and because dilatation brought relief, gave it the name of "obstructive dysmenorrhea." In these cases due to metritis or endometritis, no permanent benefit can be expected from any method of constitutional treatment. The local condition must be relieved by curettement, or in some cases by judicious local treatment, and here let me emphasize that we should impress on the minds of the profession that curettement is by no means a minor operation, considered from a standpoint of safety. The hand that wields a curette should be capable of any operation which demands skill, guided by that judgment which can and will recognize the existence of pus in the tubes or other intrapelvic structures, for the reason that curetting in cases complicated by pus tubes is a most hazardous operation. The general condition demands most careful attention. More harm is done these women by tinkering, or inefficient local treatment, than by letting them alone. In the majority of cases the curette, rest for two weeks in bed, general tonics and the correction of constipation will accomplish a cure when local applications may, and often do, result in placing the case beyond hope of relief by simple measure.

Uterine fibroids and uterine polypi cause menstrual pain by mechanical obstruction of the pelvic vessels and compression of the pelvic nerves. The cure lies in their removal, or the artificial menopause by the removal of the tubes and ovaries.

Fibroma can not be considered common in young girls, but that a fibroid may be the cause of very serious trouble is shown by the following case:

Miss J. F. E., aged 15½ years. First seen Jan. 14, 1902. Menstruated first at 12, very profuse and lasting six days, accompanied by severe menstrual pain throughout. Has menstruated every three weeks since until past four months, during which she has menstruated every two weeks. Suffering has lately become intolerable. Two years ago noticed a hard, non-sensitive lump to left of median line, low down. This has grown slowly. About three months ago noticed a dull aching in left loin, and a few weeks later a sensitive lump just below left ribs. Examination revealed what was apparently a myoma developing to the left side of the uterus between folds of broad ligament; another mass, which was indistinctly fluctuating in region of left kidney. Operation disclosed a fibromyoma pressing on and occluding the left ureter, with a resulting hydronephrosis and hydroureter. A myomectomy resulted in complete relief of all symptoms.

Salpingitis is a fruitful source of menstrual pain. In the majority of these cases we have simply the result of a neglected endometritis, i e., the inflammation has extended from the uterus to the tubes. It is suppurative or non-suppurative. The suppurative, although the more dangerous to life, does not give rise to severe menstrual pain until adhesions have formed as a result of peritonitis. That form which is an extension of a catarrhal endometritis results in early occlusion of the tubes, hyperplasia of both the tubal mucosa and mus-

cular wall of the tube, venous engorgement of the tubes and ovaries, and a varicosé condition of the ovarian veins. It is in this condition we find the most pronounced premenstrual pain, which is relieved in a few hours after the flow is established. Here the preceding and accompanying endometritis is an important factor. The timely use of the curette will prove our best aid. Let me here urge the necessity of determining the absence of pus tubes before resorting to the curette; for the operation of curetting, when pus tubes exist, is fraught with greater danger than is the removal of the tubes. There is a form of inflammation of the fallopian tubes which occurs as a sequel to the exanthematous diseases. It is usually bilateral, and is nearly always complicated by peritonitic adhesions. The pain is severe at menstrual epochs and resists all forms of local or general treatment.

The consideration of those cases which have an ovarian cause will involve the relation between ovulation and menstruation; a subject too great to be discussed in a short paper. For our purpose it is enough to remember that each month the uterine mucosa develops preparatory to the reception of a fructified ovum, and when that ovum is not impregnated degeneration with rupture of superficial vessels and denudation results in menstruation. Intermenstrual and premenstrual pain can always be attributed to the tubes or ovaries. When to the ovaries we must determine whether it be hyperemia or ovaritis.

Ovarian hyperemia is a common cause of menstrual pain in young girls. Its cause being excitement and ungratified sexual desire, it is apparent that treatment should be such as to direct the patient's thoughts from the genital organs. A change in the social and domestic habits is of prime import. The importance of relief is emphasized by the fact that if unrelieved this condition soon results in chronic ovaritis, hyperplasia, increase of fibrous tissue and complete destruction of the ovary. In the latter condition the pain becomes more severe, more prolonged, and its cure involves the removal of the organ. It matters very little whether the form be cystic, interstitial or hyperplastic, except that the pain in interstitial ovaritis is most severe, while in the cystic we are most likely to find prolonged or profuse flowing, and in many cases intermenstrual hemorrhage. The treatment of any form of chronic ovaritis is too often disappointing and requires for permanent cure the extirpation of the diseased ovaries.

In all these cases the temptation to give opium is great and should be religiously resisted; for so sure as we give it we will make an opium habitué of our patient. In prolapse of the ovary the pain is due to the resulting inflammation of the tubes and ovaries, with the consequent congestion of the entire pelvic contents. There is no method of mechanical treatment which will correct the displacement. Two operative procedures are available: First, if the ovary be not too much affected we can lift it up and secure it by shortening the utero-ovarian ligament, or stitch it to the broad ligament. Second, if the ovaries are diseased beyond repair we can remove them. The power of repair is so great that I am inclined to think we can save a very large percentage.

There is a class of cases in which no disease of the pelvic organs can be detected, and yet the suffering is as severe as in those in which inflammatory trouble exists. These comprise neurasthenics, in whom there seems to be a constant tendency to explosions of all sorts; patients who are anemic or chlorotic. The occurrence of menstrual pain in those subjects is readily appreciated if we keep in mind the utero-ovarian nerve supply and the physiology of the sympathetic. The nerve supply of the uterus, fallopian tubes and ovaries is largely from the sympathetic, with a few fibers from the second, third and fourth sacral. The sympathetic fibers are from the inferior hypogastric and the spermatic plexuses. The hypogastric is a branch of the aortic plexus, which is derived from the semilunar ganglion and renal plexus on each side. If we remember that these sympathetic centers supply branches to all the abdominal viscera, and then keep in mind the fact that irritation or stimulation of a sympathetic nerve causes contraction of vessels, lower temperature, diminished nutrition and increased tissue waste in the parts supplied by it, the increased tissue waste causing increase of carbonic acid gas in the blood, which adds to the irritation, it is not hard to understand how a neurosis may have, as one of its symptoms, painful menstruation. Particularly is this true if we keep before us the facts of the normal menstrual process, viz., that there is, first, an increase of cell growth; second, multiplication of the stroma nuclei and hyperplasia of the superficial mucosa; third, widening of interglandular and intervascular spaces from hyperplasia; fourth, occlusion of capillaries, degeneration and rupture of smaller vessels, and finally, complete denudation of the uterine mucosa. Neither is it hard to understand how these physiologic processes may become abortive as a result of malnutrition in anemia and chlorosis. Great care is necessary in these cases that we exclude local organic disease, for, if there be an endometritis or other evident local inflammation occurring in these neurotic and anemic cases, I do not believe we ever accomplish any good by constitutional treatment alone, and they are certainly not to be operated on. That there are cases of nervous disease dependent on pelvic trouble we all know. The failure to discriminate between those in which thé pelvic disease is the cause of the nervous symptoms, and those in which the neurosis is the primary affection has done much to retard the acceptance of operative assistance, by alienists. I would emphasize the statement that operative measures can not be expected to relieve nervous symptoms except when adopted for the removal of distinctly diseased organs, to the condition of which the nervous symptoms may justly be ascribed. On the other hand, I have seen some marked neurotic conditions relieved without further treatment by the removal of diseased ovaries and tubes, or the plastic repair of an enlarged and indurated cervix.

That a leucorrhea always is a symptom of disease of either external or internal genitalia should be kept in mind. That the cause of leucorrhea may be any one of several serious conditions should demand thorough investigation in every case, whether young or old. Tuberculosis of the genital organs is by no means so rare as has formerly been taught and may be the cause of leucorrhea in very young girls. Gonorrhea, with all its frightful sequelæ, I have seen in a number under the age of 15 years, and in two cases under 8 years. Herpes genitalis may occur at any age and gives rise to profuse discharge. Traumatism may be a factor of leucorrhea in some cases. The fact is no patient who has leucorrheal discharge should be treated in any manner whatever until the cause has been determined with reasonable certainty. Profuse and irregular menstruation may be symptoms of such grave import that it would seem scarcely necessary to insist on these cases being thoroughly examined were it not for the fact that we are continually confronted by the statement, made appar-

ently in good faith by active physicians, "that uterine hemorrhage in young girls only needs iron and bitter tonics to cure it." We can not determine whether the cause be metritis, endometritis, polypus, fibroids, cystic ovaries or sarcomata, except by a painstaking examination, and as any one of these may be the cause it is our plain duty to determine which it is. It is equally our duty as gynecologists and as teachers to impress on the minds of our students and the profession, that it is more important to learn how to thoroughly investigate and diagnosticate these cases than to see us operate, or to listen to a description of technic.

SUMMARY.

1. All cases, whether in young girls or in older women, in which menstrual pain, intermenstrual or premenstrual pain is a prominent symptom should be subjected to careful and thorough examination to determine its cause.

2. No leucorrhea should be permitted to pass unnoticed or treated by such "slipshod" methods as ordering a douche, giving medicine, etc., without first ascertaining its cause. In all cases where discharge is purulent a microscopic examination should be made to determine presence or absence of gonococci, tubercle bacilli or other important septic organisms.

3. All cases of excessive flowing, intermenstrual hemorrhage or prolonged menstruation should be thoroughly examined.

4. In all cases where amenorrhea exists every effort should be made to find the cause.

5. In young girls subjects of neurotic symptoms which develop at puberty or occur with each menstrual epoch, a careful and thorough examination of the pelvis will often reveal the cause.

6. If menstrual pain, irregularity, leucorrhea and neurotic disturbances follow the exanthemata, a pelvic examination is imperatively demanded.

7. In all virgins the rectobimanual examination should be used—the vaginal touch only being used when absolutely necessary.

DISCUSSION

ON PAPERS OF DRS. CARSTENS AND LAWRENCE.

DR. L. S. MCMURTRY, Louisville, Ky.—This subject has been greatly neglected by the Section, but has been discussed at length in the special societies. It is a common occurrence for the gynecologist to see young girls whose health has been wrecked by that complex condition known as neurasthenia, when all of the trouble could have been avoided. These young girls pass from one practitioner to another without getting any relief; from the general practitioner to the oculist, and then to the gynecologist, and many finally go to the neurologist. These cases should receive proper attention from the gynecologist, and there is as much to be done by withholding local treatment in many instances as in giving special treatment in other cases. There seems to be a prevailing idea that any young woman who has a disturbance of nutrition with anemia, associated with nervous symptoms, must at once be regarded as possessing no other organ but the uterus, and the treatment instituted in the majority of cases is local rather than systemic. If we could institute some system, and I take it that that is Dr. Carsten's idea, that will be applied by the family practitioner and also by those engaged in special lines of practice, that will early arrest this condition which we call neurasthenia, which will alter the mode of life, environment and education, it would be one of the greatest advances made in any branch of therapeutics. There should be that co-operation between the family physician and the gynecologist that will ensure a sufficiently accurate selection of cases that require local treatment. But the patient should be protected from unnecessary operations and local treatments. Every one engaged in gynecologic work has a large number of these cases come to him, and up to the present time they are certainly among the opprobia of our art. They are usually referred in some other direction and do not receive that accurate therapeutic attention they deserve.

DR. HANNAH M. GRAHAM, Indianapolis—The general practitioner frequently is too careless in making a diagnosis. For instance, I treated for gonorrhea a girl of 14, a child of one of the best families in the state, who had been under the care of a general practitioner for six weeks when her mother brought her to me saying that she had profuse leucorrhea. The physician's treatment consisted of a tablet every three hours, which gave no relief. The mother objected to an examination of the child, but I finally convinced her that it was absolutely necessary. I found that she had gonorrhea, probably contracted from the maid who took care of the children. It is better to examine one hundred girls who have not gonorrhea than to overlook one that has. We find many girls of 14 suffering from dysmenorrhea due to a retroversion or retroflexion, which can be corrected with a three months' tampon treatment. Why let it go on until it requires suspension or an Alexander operation just because she had not reached the right age? Whenever you find disease you have reached the age to treat it.

DR. G. BETTON MASSEY, Philadelphia—I think it is proper for this section to dwell on such matters. We should endeavor to work out plans for the practical application of the hygienic measures suggested. The fault in the imperfect development of many young girls lies in the mothers, in their housing, in over-clothing, and in their becoming over-finicky. It is hardly appropriate here, but in every section of the Association we ought to condemn the wearing of wool underclothing. In my opinion this is one of the most detrimental things that human beings do; the possibility of catching cold when the girl arrives at puberty is greatly aggravated by abolishing skin action by covering the body with an external skin of non-absorbent woolen material. Girls who spend all their time in the open air lightly clothed and taking plenty of exercise will not go to the gynecologist or neurologist. In the suburbs of Philadelphia the number of healthy girls is very great because an athletic life is fashionable. We can accomplish reform only with assistance of Dame Fashion herself. I agree that examinations are necessary when conditions do not yield to treatment, but I do think that many unjustifiable examinations are made in the clinics. Many young girls are examined when their bowels alone are abnormal; examinations are needed only in the case of girls who are suffering from septic conditions, such as a purulent leucorrhea, or from the manifest presence of a neoplasm.

DR. C. L. BONIFIELD, Cincinnati—I heartily agree with everything Dr. Carstens said, and many things that Dr. Lawrence said, but with the side of the subject that seems to be very popular I am not in accord. I have seen cases that would have been much better for an examination, but these are the exceptions. I believe that there are hundreds of girls going to the office of the gynecologist who have no right to be there. They should be treated by the family physician. The symptoms that are referred to the pelvis are of constitutional origin; and if these girls are treated in the proper way, as Dr. Carstens suggested, if their general health is improved and the development of the uterus is encouraged by forcing nutrition, these symptoms will disappear without any local treatment whatever. Of course, there are cases that require an examination. These are the cases where the symptoms are unusually severe; cases that do not yield to the treatment I have mentioned, but I believe that they are greatly in the minority. When such a case comes to us for examination shall we proceed in the way Dr. Lawrence suggested, make a recto-abdominal examination, which is always more or less unsatisfactory; or give the patient an anesthetic and examine carefully so as to arrive at a correct diagnosis? I take it that the objection to examining young girls is not the destruction of the hymen, but it is the shock to the modesty of the young girl. She is subjected to a treatment of which she really should know nothing. Her attention is called to organs of which she should not think at all.

In the majority of cases if they need an examination they also need operative treatment, and while they are under the anesthetic the little operation, which is usually a curettage, can be done. The objection to local treatment is overcome; our diagnosis is accurate, and we have done the very best we can do for our patient. I believe that if an examination is necessary at all in a young girl it should be done under an anesthetic.

DR. J. H. CARSTENS, Detroit—Dr. Bonifield has said all I want to say. If the young girls are let alone and live a natural life, they will not require the gynecologic finger nor much medicine. What they need is physiology. They should get their eliminative organs into good condition so that they do not absorb excrementitious matter. Get the stomach into good condition, make good blood, and, if they have a little leucorrheal discharge, that will take care of itself. If they are a little nervous they will get over it. This gynecologic tinkering and the giving of all kinds of medicines without any indication for it is going too far. When they have well-marked symptoms of dysmenorrhea and a purulent vaginal discharge, then they should be examined and it should be done under an anesthetic. What I plead for is more simplicity, more physiology, and less medicine and fewer specula.

DR. F. F. LAWRENCE, Columbus, Ohio—Dr. Bonifield's statement as to cases going to the gynecologist's office that do not belong there is true in many cases; but I would ask the members of this section whether it be proper or improper to have a thoroughly competent oculist examine a patient whose vision is failing as a result of chronic Bright's disease, to determine whether or not there is albuminuric retinitis. So far as the treatment of the case is concerned, it belongs to the general practitioner, but how many of us gynecologists, surgeons or general practitioners are competent to make a diagnosis of albuminuric retinitis? This is equally true in gynecologic work. Those men who have had the experience and the training are the men to make these examinations. The treatment of the patient can be carried out by the general practitioner, but if there is need for any operative work the gynecologist, the man who is skilled, should do it. Many cases suffer severely from irritable bladder, although I have found that this symptom exists only in patients having a lithemic or uric acid diathesis, and is rarely found in young girls, except in conjunction with pelvic disease. In from 75 to 80 per cent. of the cases in which this symptom exists it will disappear if you will correct the pelvic trouble and let the bladder alone. It is a constant symptom in every case of pus tubes and in cases of many other pelvic diseases. One of the most suspicious things a woman will tell you is: "Doctor, I have a great deal of trouble with my bladder." Find the cause of the trouble and remedy it; do it honestly, earnestly, manfully and fearlessly.

SKIN GRAFTING FOR THE RESTORATION OF THE EYELIDS.

REPORT OF CASES.*

OSCAR DODD, M.D.

Surgeon, Eye Department, Illinois Charitable Eye and Ear Infirmary; Assistant Clinical Professor of Ophthalmology (extramural) Rush Medical College.

CHICAGO.

Skin grafting for the restoration of the eyelids differs quite materially from that in other parts of the body. The prime objects in operating are cosmetic and restoration of function. To attain these the part must be freely movable and not differ in color and appearance markedly from the normal lid. We have also a field for operation which is movable and uneven, making the results more difficult to obtain. It is for these reasons that I think a discussion of the principles involved should be of benefit.

The statements I shall make and conclusions I have reached are from my personal experience with these cases. Along with the successes I shall give an account of my failures, for I think I have learned more from these than from the cases where the results were satisfactory. I have used most of the forms of grafts described, the sliding graft, the pedicle graft and transplantation of skin from another portion, either full thickness (the Wolfe graft) or the shaving graft (the Thiersch graft). The choice of which one to use must be determined by the individual case.

The primary causes for operating are usually cicatricial ectropion produced by burns, wounds or destructive skin lesions, as blastomycosis and lupus, or to fill in the defect after removal of tumors of the lid. Fortunately since the use of the *x*-ray the latter cases requiring operation are not so frequently encountered.

In the cicatricial cases we usually have the skin destroyed for a large area, and frequently so deep that the field for placing the graft is devoid of the normal blood vessels, and nutrition is a problem to consider. The condition is very different when the cicatrix is fairly superficial and can be entirely cut through when forming a floor for the graft.

In operating on the upper lid we have conditions very different from those found when operating on the lower. The graft on the upper lid must be as light as possible so as not to interfere with movement or press heavily on the eyeball. On the lower lid we have a tendency to draw away from the eye and we must have support for the lid margin.

I shall not consider the many methods of filling in small defects from the adjacent tissue when there is healthy skin near enough to make it possible. A great many methods may be used, varying with each particular case.

PEDICLE GRAFTS.

The pedicle graft has, in a measure, fallen into disfavor. That it has a place and one which can not be filled by either the Wolfe or the Thiersch grafts I am sure. The advantages of the pedicle graft are that when placed in a region devoid of the normal blood vessels it still has a source of nourishment. It also has the firmness and substance which is very necessary on the lower lids when the muscular tissue is atrophied, and especially when it is necessary to remove the whole thickness of the lid with a tumor. Shrinkage is at a minimum and should not be more than ¼ to 1/3 of the original size. It has also the advantage of being nearly like the skin it should replace and would only be conspicuous against the cicatricial tissue frequently surrounding it. Care, however, must be taken in men not to bring the hairy portion of the cheek around so as to transplant the whiskers on to the eyelids.

As to its disadvantages, the objection to the deformity which its removal may produce is of little importance, for the defect can be easily filled in by Thiersch grafts so that it is difficult to tell where it came from. The most serious difficulty I found was that they were too heavy for the upper lid, where I never attempt to use them now. In one of the first cases on which I operated a large pedicle graft was taken from the temple to form an upper lid, the greater part of which had to be removed with a tumor. It was so thick and rigid that the pressure produced corneal ulceration greatly complicating the condition.

WOLFE GRAFTS.

A great deal has been written both in praise and condemnation of the Wolfe graft. Before the shaving graft

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*Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

came into use it was practically the only means of filling in a defect where the pedicle graft could not be used. Considering the experience of myself and others whose work I have had the opportunity to observe, I think the greatest fault is its uncertainty. I have obtained good results at the time, only to see them completely disappear a few weeks or months later, and that even when the conditions seemed most propitious for a permanent result. In the best results I have obtained the graft did not retain more than half the size soon after the operation. This does not refer to the size of the graft before cutting, which should be four or five times the size needed. Shrinkage has varied in my experience from this amount to practically complete disappearance in a few months. If we will consider the changes which occur in a graft we may understand the reason for this. The original vessels of the skin undergo hyaline degeneration and new capillaries spring from the neighboring parts. The superficial epithelium is cast off and the dermic layer is absorbed and replaced by new connective tissue, leaving the deep layers of the epidermis as the only part of the graft remaining.

In order to avoid shrinkage I have made my grafts as thin as possible and I find my results correspondingly improved. A very helpful suggestion was made to me by Dr. Arthur Prince, to stretch the graft and pin it inside out on a piece of sterilized board, and then with scissors and pincette remove all the tissue possible. Grafts treated in this way have little left but the epidermis, and their shrinkage is comparatively small.

Among the disadvantages in their use for cosmetic purposes is the difference in color and the growth of hairs. The color remains whiter than the surrounding skin in some cases for years, if not always. If a graft is taken from a hairy part of the body, as the arm or leg, there is apt to be a growth of hair that is very annoying. In their use on the lower eyelid they give support to quite an extent, and for that reason are to be preferred to the Thiersch graft in some cases. On the upper eyelid they are too heavy and should not be used except under special conditions.

THIERSCH GRAFTS.

The shaving or Thiersch graft which has most recently come into use is probably the easiest to handle. It seems to grow everywhere if a raw surface is prepared for its reception. While some would use it to the exclusion of all other forms of grafts, I think there are certain limitations which have to be taken into account.

In the preparation of the shaving graft I have found that the best plan was to have the skin perfectly dry, and with a dry razor remove the shaving, which should be placed on the surface previously prepared. Much better grafts can be cut in this way than when the salt solution is used, and very much less trouble is experienced in getting them into place. I have never had any trouble in making them grow if the surface was protected from the secretions of the eye, and could be kept quiet until adhesion took place.

As to shrinkage, we are told that none occurs after the graft has once healed. This depends entirely on the surface on which it is placed. When placed on a smooth surface which will not permanently contract, such as the fascia of a muscle, it will remain intact, as there is nothing in the graft itself to cause shrinkage. When placed on a surface in which there is some contractive tissue, as the lower eyelid after the removal of the outer muscles, the graft is very likely to entirely disappear. If placed on a granulating surface it will undergo the shrinkage of the underlying tissue. In several instances I used it to cover over a defect produced by destruction of part of a pedicle graft. The grafts would grow promptly, but later had completely disappeared from shrinkage of the underlying tissues.

On the upper lid they always served the purpose well. By cutting through the cicatricial tissue a smooth surface was obtained and the light graft was no obstacle to perfect movement. It is this which gives them preference over all other forms of grafts for the upper lids.

It has been demonstrated that the quicker the circulation of the graft is established after being put in position the less the subsequent shrinkage. For this reason the field on which the graft is placed should be smooth as possible and kept quiet so that no wrinkling will occur. To accomplish this I stitch the lids together when operating on the lower lid. I find the better plan to keep the upper lid in proper position is to put sutures through the edge of it and fasten to the cheek below with adhesive strips. This stretches the lid better, and gauze can be put along the edge to take up the secretion, which is frequently very profuse and troublesome, due to the previous exposure of the conjunctiva.

Fig. 1.—Case 1. Before any operation was performed.

I have not mentioned the operation where the conjunctiva is also destroyed, as occurs with some tumors. My results have not been satisfactory, and I should prepare a lining to the graft before swinging into place, as recommended by Everbusch. The skin should be dissected up some days before the operation and the under side covered with a Thiersch graft. As soon as it is well healed the flap may be swung into place and we have a covered surface to bring against the eyeball. In one of the cases which I shall report I used Thiersch grafts to cover the inner side of the lower lid made by a large pedicle graft. They healed in place well, but as the patient did not return for the final operation it was not a complete success.

I have said nothing as to the manner of placing or anchoring the grafts. Dr. Hotz has devised a method of anchoring in which the grafts are divided so as to fasten the edge of the one on the eyelid along the border of the cartilage on the upper lid and to the periosteum of the orbital margin for the lower lid. The remainder of the defect may be filled in by Thiersch grafts with

no fear of retraction, he says. My experience with this method is limited to one case, but the principle is a good one and I hope it will obviate some of the difficulties I have experienced.

REPORT OF CASES.

In order to illustrate better my conclusions I will report a few cases.

Case 1.—This is of the severe type of cicatricial ectropion of both upper and lower lids. A man, aged 25 years, came under my care in the fall of 1900. He was injured in an explosion six years before, being thrown face down into a coke fire, where he lay for some time until rescued. His face was severely burned, especially over the nose and eyelids, and some distance on to the scalp. He had received no treatment except that immediately after the injury.

There was complete ectropion of both lower lids, and the skin was tightly adherent over the nose, the left side of which

Fig. 2.—Case 1. Immediately following the operations.

was partly destroyed and the left side of the mouth was drawn up by the cicatrix. The forehead was deeply cicatrized and the upper lids turned out at their edge, being completely everted when he tried to close the eyes. The eyeballs were fortunately normal in spite of the exposure, as the corneæ were only protected when the eyes turned up. The cheeks were not so deeply cicatrized, but enough to prevent any growth of the whiskers. In December, 1900, I operated to restore the right lower lid, taking a large skin flap from the cheek with a pedicle placed high enough so the contraction would not pull the lid down. This was sewed in place after dissecting up what remained of the lower lid and stitching to the upper. The field for placing the graft at the nasal side was entirely cicatricial tissue devoid of blood vessels except a few large ones, the oozing from which it was almost impossible to control. The graft was about 4 inches long and 2 inches at the widest point. It all healed well except a small piece at the tip where a hemorrhage had taken place underneath it. The defect in the cheek was closed up by loosening the skin and drawing together.

In January, 1901, I operated on the left lower lid in the same manner, but the tip and part of the lower border necrosed. Three weeks later I filled in the defects where the graft had necrosed, and also on the cheek with Thiersch grafts. These grew in place, but those on the eyelid completely disappeared later. One month later I operated on the upper eyelids, filling in the defects with Thiersch grafts. The secretion from the conjunctiva was so profuse that I could not keep the wounds free from infection and part of the grafts would not grow. I tried Thiersch grafts again and a pedicle graft on the left, but they all necrosed. I dressed the wound with oxychlorin for some time and then applied some Thiersch grafts, which healed in place. In March the patient had to go home, although there was some parts not healed. I have not seen him since, but he writes me that he has continued in good condition, and recently sent me the last pictures, taken two years after his discharge. The grafts seem to have remained in about the condition they were when he left.

Case 2.—A man, aged 37 years, a carpenter by trade, entered the hospital in December, 1899, giving a history of having his face cut by a barber in June, 1895. It became inflamed and the wound discharged for six months. The redness and swelling gradually spread over the entire left side of the face and it was studded with clusters of pustules. He had been treated for years for lupus without result. Hearing that he had consulted Drs. Hyde and Montgomery, I took him to

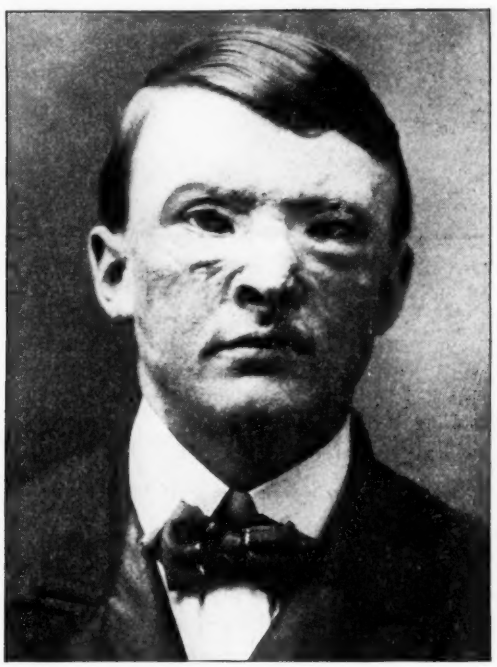

Fig. 3.—Case 1. Two years after the preceding picture.

them for diagnosis. They pronounced it blastomycetic dermatitis, and under their direction he was entirely cured by the use of iodids in large doses and hot bichlorid of mercury lotion.

He entered the hospital again in December, 1900, with the disease cured, but with a dense smooth cicatrix extending from below the left jaw up to the nose and including the left temple and upper eyelid. The outer canthus was pulled out greatly and the lower lid drawn down and out and much stretched. As there was no tissue to make a graft on the face, I took a pedicle graft from the temple where the cicatrix was not very deep and swung it around to form the lower eyelid. As the scar tissue on the face was very deep it was difficult to stop the hemorrhage and the tip of the graft was forced out by the hemorrhage and necrosed. A few days later I covered the place on the temple where the graft was removed and the bare places on the lid with Thiersch grafts. In January, 1901, I operated on the upper lid and covered it with Thiersch grafts. The lower lid still having a tendency to ectropion, I made an incision near its border and filled in with Thiersch grafts. I closed up the outer part of the canthus by means of a Fuchs tarsorrhaphy.

In spite of perfect healing the Thiersch grafts entirely disappeared on the lower lid. On the upper lid, where I was able to get a smooth surface, they gave a perfect result as well as on the temporal wound, where it is difficult to tell their location.

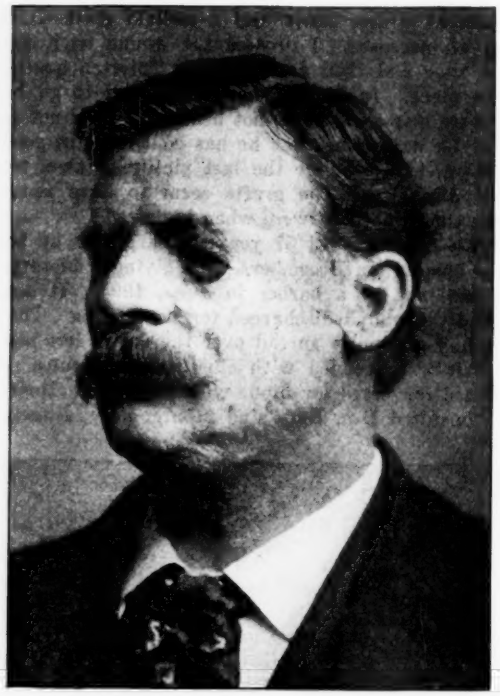

Fig. 4.—Case 2. Showing the dense scar and ectropion of the eyelids of the left eye.

In January, 1902, he returned with epiphora and partial ectropion of the lower lid, and I made an incision along its border and filled the cavity with a Wolfe graft prepared very thin. This has kept the lid in very good shape and the graft

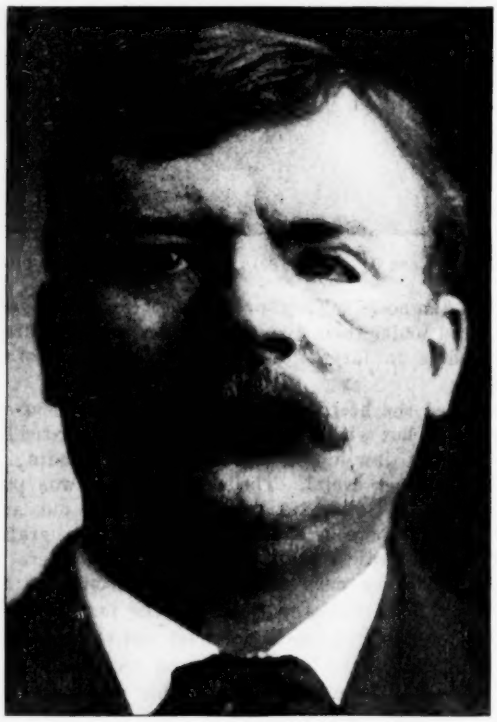

Fig. 5.—Case 2. About two years after the operations.

is about half the size it was when first placed a year ago. That it is impossible to tell the ultimate outcome in these cases is well shown by the fact that the contraction has apparently forced the large pedicle graft out toward the temple. This has allowed the lid to draw down some, but not enough, so I have thought best to operate again. The tension of the scar on the eyelids at the temporal end holding the outer

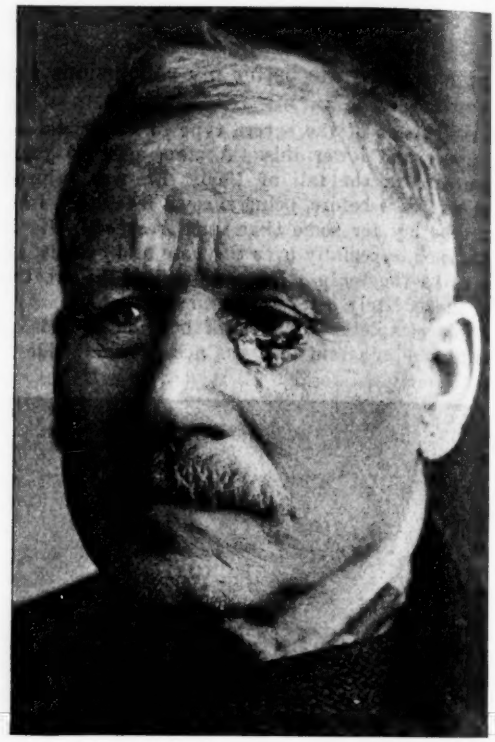

Fig. 6.—Case 3. Epithelioma of the lower lid.

canthus away from the eye is very troublesome, but I have not been able to devise any means to correct it.

CASE 3.—Man, aged 65 years, well nourished, came under my care in October, 1901, at the Eye and Ear Infirmary. About one year previous he had noticed a wart-like growth on

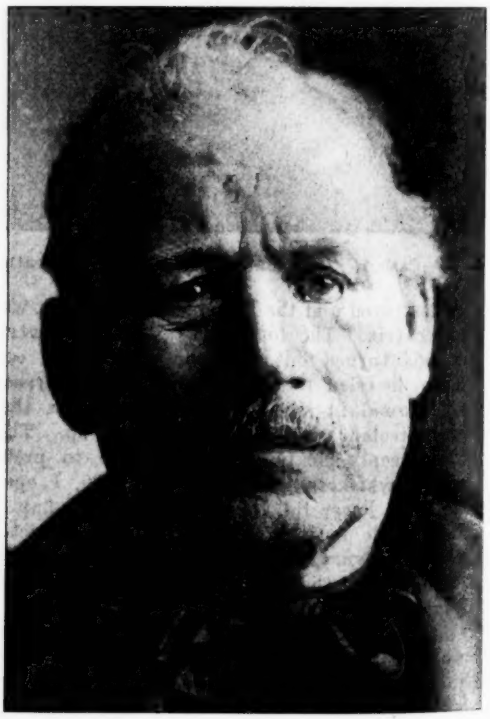

Fig. 7.—Case 3. About eighteen months after removal of tumor.

the left lower lid. This grew until at the time of entrance it involved the whole lower lid and extended a little beyond both outer and inner canthi. It was an epithelioma involving the whole thickness of the lid. I removed the growth and

formed a lid by a large pedicle graft from below on the cheek. I covered the inner surface with Thiersch grafts, as well as the defect on the cheek. It all healed in place well, but at the nasal end the scar at the line of union contracted so there is a defect. I wished to operate again, but he is so well satisfied with the present condition he will not consent.

CASE 4.—Mr. T. had an epithelioma of the right lower lid involving the lid margin for about the outer half and extending well over toward the nose. In October, 1900, I removed the growth, leaving a large defect, which I was persuaded to fill in with a Wolfe graft from the arm. The graft was about 2x3 inches before dissecting up. It fitted in place well and the immediate result was good, but by January, 1901, it had shrunken to about one-half inch long and one-eighth inch wide, and ectropion had taken place. I then dissected it out thoroughly and covered the surface with Thiersch grafts. The results were perfect at the time, but later the contraction had caused a marked ectropion. In December, 1901, I filled in the defect by a sliding graft from below, but it was not sufficient to support it well and the edge of the lid turned out. In June, 1902, I put in a Wolfe graft prepared very thin, and that has given sufficient support, so the eye is well protected. The reason for failure in the first place was probably that the graft was too thick, leaving too much tissue to shrink. The last graft was prepared as thin as possible.

SUMMARY.

In conclusion I will summarize my results as follows:

For the upper lid Thiersch grafts should always be used, unless the whole thickness of the lid is destroyed.

In forming the lower lid, if there is adjacent skin available it should be used to form the lid and the resulting defect filled in with Thiersch grafts. When there is dense cicatricial tissue for the floor of the graft a pedicle graft is the only one which I have found satisfactory.

Should pedicle grafts not be available and the underlying tissue have proper vascularity, then either Wolfe or Thiersch grafts may be used, and my results have been best with a Wolfe graft prepared very thin.

DISCUSSION.

DR. A. B. HALE, Chicago—In a severe burn from a gasoline explosion I followed the classical operation and made a flap; I want to warn against that method as a faulty operation. I did a Thiersch after that with a successful result. The vitality is too much impaired for a flap operation in these cases. A Thiersch gives better results.

DR. WM. H. WILDER, Chicago—As to the question whether we will employ a pedicle, or a Wolfe, or a Thiersch graft, I agree with Dr. Dodd in his conclusions. Where it is possible to get a pedicle graft from the forehead, or cheek, it should be used, for there is more assurance of its vitality being preserved than when the graft is taken from some more or less distant portion of the body. It is useless, of course, as Dr. Hale has said, to use a graft the vitality of which has been impaired or destroyed. The method used by Dr. Dodd of removing as much as possible of the fat from the subcutaneous tissue is a very good one. In my experience the Thiersch graft, where there is a contracting scar, will shrink. There is no one operation that will meet all cases of entropion. In some cases removal of a good part of the tarsus is a good procedure. One important step in the Hotz operation is the removal of the little bundle of muscle fibers just beneath the skin of the lower flap. This allows the lower flap to grow firmly to the anterior surface of the tarsus. Some operators prefer mucous membrane for marginal graft; I prefer something that will hold the lips of the wound apart, and accordingly use a skin graft taken from behind the ear.

DR. W. HAWLEY, Chicago—The man who is in practice without a large clinic has few of these cases to operate on, so that my experience in skin grafting is limited. I had one case of a large fibrous tumor that occupied the region over the inner canthus. I employed a pedicle graft and the result was very good indeed. I have had more experience with operations on the eyeball with the Thiersch graft in relation to pterygia. I have tried both methods and, like Dr. Hale, want to say never use a mucous graft if it is possible to use a Thiersch. Your first operation may be a failure if you do not follow the advice given by Dr. Dodd, to cut them very thin. Within the last few months I saw an operation which was a failure simply for that reason; the graft was made very thick. At a second operation I suggested its being cut thin, and it was a success.

DR. F. C. TODD, Minneapolis—Removal of the muscular tissue from under the skin as well as from the upper surface of the tarsal cartilage is essential toward securing firm union of the skin to its anchor, the cartilage, and is a feature of the operation on which Dr. Hotz lays great stress. Another point in securing a graft, which I learned from Dr. Wilder, is that of using an instrument he devised for grooving the cartilage, and which he showed several years ago at a meeting of this Section. He uses this instrument also for getting a graft from behind the ear or from the palm of the hand. There are two small blades that come together like a V and pick up a very neat graft, the width and length being governed by the pressure exerted in using the instrument. It is important to stop the hemorrhage with hot applications, for if we do not succeed in securing complete hemostasis the graft will not take, the blood preventing union. I now use in these cases adrenalin with excellent results. Of course, it is necessary that it should be aseptic. I do not think the use of adrenalin prevents uniting of the cut surfaces excepting when sepsis is introduced.

DR. R. W. MILLER, Los Angeles, Cal.—Controlling the hemorrhage is a very important point, and I have frequently used adrenalin; but it must be borne in mind that if it be freely used, unless a very firm after-dressing is applied, there is likely to occur secondary hemorrhage. Another good method of controlling the hemorrhage is to have an assistant compress the temperal artery.

DR. DODD—In regard to the point of Dr. Hale, my cases of Thiersch graft on the lower lid have been absolute failures. Dr. Hotz advocates the Thiersch graft as the only thing to use, and he says the reason I have failed with it is that I have not anchored my grafts properly to prevent contraction. I have only used his method in one case, and until I have had further experience it is impossible for me to judge of that point. I have never had any trouble with the Thiersch graft on the upper lid.

TRAUMATIC LESIONS OF THE OCULAR ADNEXA;

WITH REPORT OF A CASE OF CONTUSED WOUND OF THE EYEBROW, RESULTING IN COMPLETE MONOCULAR BLINDNESS UNACCOMPANIED BY OPHTHALMOSCOPIC CHANGES.*

ELLET O. SISSON, M.D.
Member Ninth International Ophthalmological Congress.
KEOKUK, IOWA.

Traumatic lesions of the ocular adnexa would include injuries of the eyebrow, eyelids, conjunctiva, orbital walls and soft parts of the orbit. This paper will deal more particularly with injuries of the eyebrows, orbital walls and soft parts of the orbit, as illustrated by the cases reported.

Wounds of the superciliary region are of frequent occurrence, and when superficial and limited to the soft parts, are not usually serious, but they may be followed by disastrous consequences, and even by fatal results should they affect or extend to the underlying bones.

If bone tissue is involved, osteitis, necrosis and fistulas may result. Suppuration of the orbital connective tissue is in all cases a serious complication of contusion of the superciliary region. Injury of the supraorbital

* Read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. J. A. Lippincott, Frank Allport and John E. Weeks.

nerve may produce craniofacial neuralgia, muscular twitchings in the facial region, trophic changes in the eye, and finally give rise to visual disturbances that are characterized particularly by photophobia and accommodative asthenopia. This is particularly the case if the nerve or any of its branches is imprisoned in an adherent cicatrix.

As a rule, one or more of the walls of the orbit are involved in an injury to the orbital edge, but that the violence of the traumatism is undoubtedly neutralized, in part, by the prominence and the resistance of the edge of the cavity, is shown by Berlin's statistics, in which, out of 19 cases of simultaneous fractures of the edge of the orbit and of the vault, there were 16 recoveries, while 52 cases of fracture limited to the superior wall were followed by 41 deaths.

Again, direct fracture of the superior wall of the orbit is more liable to involve the optic canal. The optic nerve and its sheath are often violently torn and compressed, resulting in a retrobulbar neuritis with loss of vision, or a secondary form of compression from callosities or periostitis may take place followed by the same results.

Callan has recently reported nine cases of injury to the orbital walls, resulting in immediate unilateral blindness, in which it was believed that the line of fracture ran through the optic foramen.

Von Hölder has published the results of his examination of the bones in 124 cases of fracture of the skull. Among these there were 86 of fractures of the bone, and in 79 of these the fracture involved the roof of the orbit. In 63 cases there was a fissure or fracture running through the optic foramen, always through its upper wall, sometimes also through the inner wall. In 42 cases there was hemorrhage into the sheath of the nerve, and he never found blood in the optic sheath unless the bony canal was fractured. The hemorrhage was sometimes found in both optic sheaths.

As regards injuries to the soft parts of the orbit, it is a well-known fact that as a result of the shape and the free mobility of the eyeball, a wounding object may pass around its fibrous sheath and produce an injury of the surrounding soft parts of the orbit only. The importance of such a form of traumatism depends above all on the cleanliness of the penetrating body. If the offending instrument or foreign body has not been freed from septic material while passing through the skin, the conjunctiva, and the orbital septum, it may act as the cause of a cellulitis, endangering not only the vision, but also the life of the patient. Section of the ophthalmic vessels, rupture of the ocular muscles, injuries to the sensory and the motor nerves, and the presence of foreign bodies are among the most interesting lesions of those parts.

The ocular muscles are sometimes injured without any accompanying luxation of the eyeball; but these accidents are rather rare, not more than twelve or fifteen having been reported. The internal rectus is the one most frequently injured.

In these cases the loss of continuity of the muscular fibers has been both partial and complete. The prognosis, so far as the muscle is concerned, is generally favorable, for if a functional loss of power result it may be restored by operative interference.

Actual division of the motor nerves is rare. Berlin could find none such reported in literature. He himself reports two cases, which can not be explained in any other way than by division of the nerve fibers supplying the muscles.

In reporting the following case of a contused wound of the eyebrow, resulting in complete monocular blindness without ophthalmic changes, I do not report it as a rare injury, but because it serves to give a clinical picture of some of the main points in this paper.

CASE 1.—Mr. F. Van A., age 34, was caught by a belt of a rock crusher. His head was badly bruised and he sustained a severe cut over the right eyebrow in a transverse direction from the internal angular process of the frontal bone to the external angular process, and extending to the bone; injuring the periosteum at one point and passing directly across the point of exit of the supraorbital nerve.

The frontal sinus was not involved. The injury was followed by total loss of vision in the right eye. No ophthalmoscopic changes at this time. After the wound healed the patient suffered from craniofacial neuralgia as the result of the supraorbital nerve being imprisoned in the adherent cicatrix. Within a month's time the vision returned until the patient could see large objects about the room, but there was no further improvement. No ophthalmoscopic changes. In this case there doubtless was an indirect fracture of the optic canal, resulting in an injury of the optic nerve, which was followed by a retrobulbar neuritis.

The second case illustrates the result of an injury to the soft parts, and is rare, in that there was either rupture of an ocular muscle, detachment of its tendon from its insertion into the sclera, or an injury to a motor nerve, complicated with an injury to the terminal branches of the superior maxillary nerve with loss of sensation of the parts supplied by them.

CASE 2.—J. A. S. presented himself Jan. 19, 1901, at my office for examination, giving the following history: Dec. 31, 1900, he was struck in the right eye with the handle of a closed pocket knife held in the fist, the knife striking the lower margin of the orbit and the globe of the eye at its outer and lower quadrant. Swelling followed, and patient suffered considerable pain. There was loss of sensation over the region of the face supplied by the terminal branches of the inferior maxillary nerve; there was also loss of sensation in the gums of the upper jaw of the same side.

Patient placed himself under the care of a general practitioner, who gave him a simple eye wash. An examination of the eye revealed considerable lachrymation and photophobia, and some congestion of the eyeball at the point of injury.

It appeared as if the conjunctiva and Tenon's capsule had been torn by the blow. There was diplopia and the eye refused to turn out, indicating that there had either been an injury of the muscular tissue of the inferior oblique and external rectus, or a complete traumatic paralysis. There was also marked ptosis. V.=20/30. Fundus normal. At this time sensation had returned to the gums of the upper jaw, but there was still complete anesthesia of that region of the face supplied by the terminal branches of the inferior maxillary nerve. Unfortunately the case passed from observation and the permanent nature of the injuries was never ascertained.

The third and last case that I desire to report is a type of the more serious wounds that may occur in this region, and is interesting because of the extent of the injury, the complications, and the fact that there was no serious brain involvement.

CASE 3.—P. J., male, aged about 25 years, was shot in the head. Bullet entered ala of the nose on the right side, coursing upward and to the right, fracturing the right nasal bone. It then passed through the posterior half of the eyeball and lodged in the deep tissues of the orbit. There was great swelling and ecchymosis. An enucleation was made and the bullet extracted. Patient was in a semi-comatose condition at the time of the operation and remained so for twenty-four hours following. An interesting feature of this case was that it was complicated by infection. An abscess formed, the pus burrowing through the upper lid, leaving a good-

sized fistula. Healing took place soon after the formation of this opening, and the patient made a good recovery.

The main conclusions to be reached in a study of traumatic injuries of the ocular adnexa are: first, the necessity for a guarded prognosis in all cases and secondly, the value of asepsis and antisepsis in the treatment of all wounds located in this region.

DISCUSSION.

Dr. Casey A. Wood, Chicago—I have had a number of cases of incised wounds of the lids, involving their margins. We have an incised, or more frequently an incised and lacerated wound of the lids, penetrating the whole thickness of the lid, and generally we do not see these cases for some days or weeks after the injury. Some one has, perhaps, done his best to bring the wound margins together, and generally not very successfully, partly because of the irregularity of the edges and partly because of the sloughing due to infection or to the original injury. These have always been to me cases of great interest. After trimming the edges of the wound I have been in the habit of passing "anchor" sutures involving all the tissues of the lid, to keep the wound edges in close apposition (illustrating on board) on everting the lid. Then the conjunctiva down to the lid margin is sutured with a continuous thread, a separate suture being carried over the intramarginal space to bring the lid edge tissues close together. The skin is treated in like manner, after which I remove the deep sutures which only served a temporary purpose. This is the only way in which I have been able to accomplish the results we desire in these injuries, that appear so simple and yet require, if we desire good cosmetic results, rather careful treatment. As to gunshot wounds of the orbit, I have had two cases where the optic nerve was not injured, and yet optic atrophy was the result. Notwithstanding the "vibration" theory of some observers, I have not been able to satisfy myself as to the cause of this untoward result. Another matter worth considering is the "concussion" cataract that may follow almost any injury to the orbit, or to the head in the region of the eye. The old idea was that the concussion of the fibers of the lens brought about these secondary changes. I am inclined to think that it is really the profound though transient interference with ciliary circulation that brings about these cases of concussion cataract. Some years ago I published a number of these cases and have had several since. I am curious to know what the members of this Section think about the etiology.

Dr. Wm. C. Posey, Philadelphia—Three cases in which there was complete monocular blindness following an injury to the head, but in which vision was after a time fully restored, were reported by Nettleship and one by myself, before the College of Physicians of Philadelphia in 1899. In these cases the blindness is not immediate, but comes on some hours afterward. The ophthalmoscope shows evidence of compression of the fibers of the optic nerve, and from the deep-seated pain on motion of the eyeball, and a throbbing sensation which is occasioned by blowing the nose, involvement of the sphenoidal cells is indicated. These cases are of interest from a prognostic standpoint, for they show us that when blindness is not immediate after a head injury, vision may be regained, and every therapeutic effort should be made, therefore, to accomplish this result.

Dr. Harold Gifford, Omaha—Prior to this case of Dr. Posey's I was prepared to give my patients with blindness after a trauma of the orbital wall an unfavorable prognosis. I had never seen any of them recover, and had never seen the history of any recovery. Dr. Posey's case seemed to confirm so strongly the words of Panas: "The words 'never' and 'always' have no place in medicine." As to Dr. Wood's method, I have been afraid to leave knots on the under surface of the lid. In Königsberg, where similar operations are very common, the reports speak of inspecting the cornea from time to time to see if the knots are causing ulceration of the cornea. In doing this kind of an operation I have been impressed with the importance of bringing the conjunctival edges into close apposition, and have passed the needle through the lid from its outer surface, then after completing a continuous suture of the conjunctiva have passed the needle clear through the lid again so as to leave both knots on the outer surface of the lid. The tension sutures which Dr. Wood says he takes out before bandaging the eye, I leave in. They are important in relieving the strain of the orbicularis on the other sutures.

Dr. John O. McReynolds, Dallas, Texas—My experience has been that in paralyses produced by injury to the nerves that supply the muscles of the eye the normal function of the muscles has returned. Further, if the blindness has been caused by hemorrhage, when that is absorbed the vision returns; but if there is fracture of the foramen with rupture of the nerve, rapid, white atrophy ensues with no return of vision.

Dr. Oscar Dodd, Chicago—I remember well two gunshot wounds of the orbit. The son of a physician had a small shot pass through the upper lid and produce complete blindness, probably by striking the optic nerve. There was no change in the nerve, however, when I examined him two weeks after the injury. The other case had a bullet from a revolver held against the temple pass through the orbit, injuring the optic nerve. In this case there was atrophy of the nerve. As to those wounds of the upper lid, mentioned by Dr. Wood, I have often found the retraction very difficult to prevent. In some cases it produces considerable deformity. I always sew the conjunctiva and skin separate, and, when possible, I trim the edges so they will overlap and the lines of union will not be opposite each other. This helps to prevent the retraction.

Dr. Allen Greenwood, Boston—Dr. McReynold's statement is the common experience, I think, as the optic nerve passes through so small a foramen that any fracture there will crush it. In the other nerves the injury is not from crushing, but rather from pressure of exudates and hemorrhages. I had a case recently of such an injury, where a small boy received a blow on the infraorbital ridge with apparently no injury to the brain. In a week, when the bandage was removed from the eye there was blindness with complete paralysis of the external rectus, probably due to fracture near the base. The paralysis of the external rectus disappeared in a week's time, while the injury to the optic nerve resulted in complete atrophy. The optic nerve was distinctly atrophic a week after the injury.

Dr. Edw. Jackson, Denver—I think probably the important point in reference to the prognosis in these injuries involving blindness is the time in which the blindness supervenes. If it is a direct injury to the nerve the blindness will be immediate, and there will probably be no recovery whatever. But in a large number of them the blindness is not immediately discovered; the patient is stunned; or in other cases there is a good deal of effusion and the eyelids are closed for some days. In a case where there was a clear history of seeing at all, certain light perception, after the injury, I think the prognosis would be at least a chance of some recovery of sight. But if there has been no vision in the eye after such injury, the probabilities would be strongly against any recovery of sight. All cases of direct injury to the optic nerve that caused serious impairment of vision that I have known of have shown no evidences of sight after the injury at all. I recall one case of gunshot injury where the patient was not much shocked and the first thing he noticed was that the eye was blind. The optic nerve had been cut by the shot. I think the point to determine the prognosis would be whether or not the blindness was immediate.

Dr. Albert E. Bulson, Jr., Fort Wayne, Ind.—We should not lose sight of the fact that many of these cases are caused by hemorrhage or effusion, and in such cases the prognosis is more favorable. If we put our patients at absolute rest and begin eliminative treatment we will sometimes secure results that at first may seem impossible. I had one such experience in a case where there resulted absorption of the effusion around the optic nerve which had produced total blindness. The patient secured 20/50 vision following treatment of a condition that seemed to offer little hope of favorable results. Our prognosis should be guarded.

DR. LEARTUS CONNOR, Detroit—It strikes me that about this topic there are as many sides as to a sphere. I recall two cases of gunshot wound of the orbit that were never followed by any ill result. I recall a recent case of a woman in middle life, who, when a child of 6, fell against a door and hit her left eye at the outer brow. There was no scar to indicate the lesion, but from that time the eye turned outward and she had double and imperfect vision. When I saw her she had a choroidal atrophy with some optic atrophy. I presume at that time there was probably hemorrhage in the fundus of the eye. I never feel able to say at the time of injury just what result may be expected.

DR. WILLIAM ZENTMAYER, Philadelphia—I wish to call attention to the frequency with which we find central choroiditis, or perhaps in some cases holes at the macula, in these cases. In some instances it may be the primary trouble and the optic change is secondary.

DR. SAMUEL L. LEDBETTER, Birmingham, Ala.—About two years ago I had a patient who had been struck in the eye by the breech pin of a gun and the ball destroyed. It gave no trouble other than the loss of sight. The patient came to me saying that lately he found there was something in the outer angle of the eye that gave him trouble. I found a piece of a glass bottle ⅝ of an inch across, and supposed I had gotten that which caused all the trouble. He said that about three months before he had thrown at a dog and struck a bottle and that a fragment flew back and struck him in the eye. Ten days later he came back with a suppurating sinus. I cut down into the tissues and found a metallic substance below the surface, which was removed with difficulty. It was the breech pin of the gun, measuring 1½ inches in length and ⅞ inch in diameter and weighed 1½ ounces. It had been there three years.

DR. JOHN E. WEEKS, New York—I would like to mention a few cases that show the extensive injury to the orbit that can be sustained without affecting the eyeball. The first patient attempted to commit suicide, shooting himself in the temple. The ball passed through both orbits without in any way interfering with vision. Another case somewhat remarkable was that of a young man who was fencing. The point of the foil struck him just below the margin of the lid, in the left eye; the only wound was a tearing of the skin, which was raised for perhaps the distance of 1 cm. Very shortly after this occurred there was paralysis of the external rectus. This lasted for six weeks, disappearing gradually. Another case was one in which a young man in falling caught on a meat hook which entered the orbit, caught up the internal rectus and tore it across without injuring the eyeball, but lacerating the lid somewhat. There was, of course, a marked divergence, but by catching up the tissue of Tenon's capsule together with the torn muscle and suturing it to the eyeball the diplopia was corrected.

THE PRODUCTION AND NATURE OF STREPTOCOLYSIN.*

GUSTAV F. RUEDIGER, M.D.
CHICAGO.
(From the Memorial Institute for Infectious Diseases.)

In 1897 Bordet[1] drew attention to the fact that there generally is more or less hemolysis in the blood of a rabbit which has died of streptococcus infection. This hemolysis is not constantly observed, but was present, for instance, in 37 of 40 rabbits dying of streptococcus infection, in which it was looked for in this laboratory during the last eight months. This phenomenon seems to be unique in the field of bacteriology, although there are several other organisms, such as the *B. tetanus*,[2] *B. pyocyaneus*,[3] *Staphylococcus pyogenes*,[4] *B. typhosus*,[5] *M. tetragonus*,[6] *B. megatherium*,[7] and others, the filtered cultures of which are capable of hemolysing red corpuscles of various animals. These organisms, however, do not produce hemolysis in the body of an animal which has been injected with the young cultures, as is the case with the streptococcus. Todd[7] has found, however, that filtrates from an old culture of *B. megatherium* produce hemoglobinuria in a guinea-pig, when injected subcutaneously. If larger quantities are injected hemoglobinuria, hematuria and finally death of the animal are produced. Kraus and Ludwig[9] found marked anemia in rabbits after the subcutaneous injection of old cultures of *Staphylococcus pyogenes aureus*, or their filtrates.

Bordet's observation soon led to the attempt to produce this hemolysin in a test tube, but the earlier experiments were uniformly unsuccessful. It was found that filtered cultures, in all ordinary media, possessed no hemolytic properties, regardless of how strongly that same streptococcus produced hemolysis when injected into a rabbit. Recently, however, Besredka[10] succeeded in getting filtrates that hemolysed not only rabbit corpuscles, but also those of many other animals, by growing a virulent streptococcus in heated rabbit serum and passing through a Chamberland filter. Besredka made a close study of this streptocolysin, but none of his experiments throw much light on the nature of this substance. In consideration of this fact it was suggested to me by Professor Hektoen to repeat the experiments, with the view of verifying Besredka's findings, and to carry the work further in an attempt to throw some light on the nature of streptocolysin.

The streptococcus used in these experiments was obtained from a retroperitoneal abscess in a guinea-pig, which had been injected intraperitoneally with a fungus. It forms rather short chains, renders ascites-bouillon uniformly turbid and acidifies milk in 24 hours, but does not coagulate it. When it was isolated 5 c.c. of a 48-hour culture killed a full-grown rabbit in 4 days. The virulence was increased, by passage through 30 rabbits, until 0.0003 c.c. of a 24-hour culture in ascites-bouillon kills a rabbit in less than 20 hours.

Streptocolysin was prepared in practically the same manner as described by Besredka. The best results were obtained with filtrates prepared as follows: Mix 1 part of human serum with 2 parts of rabbit serum, heat the mixture to 56 C. for 30 minutes, inoculate this with a young virulent culture of streptococci, incubate for 20 to 22 hours, dilute with an equal volume of physiologic salt solution,[11] and pass through a porcelain filter.

Besredka recommends that the inoculation be made directly from the heart's blood of a rabbit which has just died of streptococcus infection and in which hemolysis has taken place. This was not found necessary. The dilution with salt solution is recommended to facilitate filtration of the serum. Great care must be observed in the selection of a filter. While the serum must pass through perfectly clear and free from streptococci, too fine a filter must not be used, as it removes from the

* This work was carried out under a grant from the American Medical Association.

1. Annales de l'Institut Pasteur, 1897, xi, 177.
2. Ehrlich: Berlin. klin. Wochenschr., 1898, xxxv, 273; Madsen, Zeitschr. f. Hyg. u. Infect., 1899, xxxii, 214.
3. Bulloch and Hunter: Centralbl. f. Bakt., 1900, xxviii, 865; Weingeroff, Ibid., 1901, xxix, 777.
4. Neisser and Wechsberg: Zeitschr. f. Hyg. u. Infect., 1901, xxxvi, 299.
5. Levy u. Prosper Levy: Centralbl. f. Bakt., 1901, xxx, 465.
6. Lubenau: Ibid., 1901, xxx, 356.
7. Todd: Lancet, 1901, vol. ii, 1663.
8. Kraus u. Clairmont: Wien. klin. Wochenschr., 1900, xiii, 49.
9. Wien. klin. Wochenschr., 1902, xv, 382.
10. Annales de l'Institut Pasteur, 1901, xv, 880.
11. 0.75 per cent. salt solution was used in these experiments.

serum its hemolytic property. If the serum loses most of its color while passing through the filter it is likely to be worthless.

Filtrates obtained in this manner were proven to be sterile by inoculating a tube of ascites-bouillon with 1 c.c. of filtrate and incubating for 48 hours. No growths were obtained. They hemolyse both washed and unwashed corpuscles of man, rabbit, dog, goat, sheep, beef, hog, guinea-pig, chicken and horse—in fact, all that have been tried. The corpuscles of man and rabbit are least resistant. One drop of a thick suspension of these corpuscles, washed, is completely hemolysed by 1 c.c. of streptocolysin in 1½ hours, if kept in the incubator. Those of chicken, beef and horse are somewhat more resistant than the others, but their dissolution is considerably hastened by washing them five times in physiologic salt solution before they are subjected to the influence of streptocolysin.

The fact that these corpuscles are hemolysed more rapidly after being washed at once gave rise to the suspicion that there is something in the sera of these animals—antihemolysin—which protects the corpuscles against streptocolysin. That this supposition is correct is proven by the following experiment: Take four small test-tubes, (a), (b), (c) and (d), and introduce 1 c.c. of streptocolysin into each. To (a) add 1 c.c. of normal chicken serum and in one-half hour add one drop of normal chicken blood. To (b) add 1 c.c. of physiologic salt solution and one drop of a suspension of washed chicken corpuscles, in physiologic salt solution. To (c) add 1 c.c. of chicken serum which has been heated to 55 C. for one-half hour, and in one-half hour add 1 drop of a suspension of washed rabbit corpuscles. To (d) add 1 c.c. of salt solution and 1 drop of a suspension of washed rabbit corpuscles. Transfer all tubes to the incubator and examine in five hours. There is complete hemolysis in (d) and (b), but no hemolysis in (a) and (c). No hemolysis is observed in (a) and (c) in eight hours, but there sometimes is a trace in 24 hours. The sera of beef and horse also protect the corpuscles against streptocolysin, but not so completely as does chicken serum.

Many other substances, as solutions of various salts and colloidal solutions of gold and platinum, were tested for antihemolytic properties, but with very little success. A 1 per cent. solution of formaldehyd in physiologic salt solution retards hemolysis for 5 to 6 hours if it is mixed with streptocolysin in equal proportions before the corpuscles are added. Treating the corpuscles with such a solution for 1 hour, washing and then adding them to a tube of streptocolysin does not interfere with their hemolysis.

The filtered cultures in heated rabbit serum of two non-virulent streptococci were tested for hemolytic properties, but these filtrates produced only a trace of hemolysis in 24 hours.

Other sera than rabbit serum may be used as culture media in the preparation of streptocolysin, but the substances produced in these sera are not so active as those produced in rabbit serum. In studying the streptocolysins produced in different sera Besredka came to the conclusion that they are not alike. He found, for instance, that streptocolysin produced in human serum hemolyses corpuscles of man, rabbit, guinea-pig, goat and sheep, but not those of chicken and goose. That produced in goat serum hemolyses corpuscles of man, rabbit and guinea-pig, but not those of goat, sheep, chicken and goose. He concluded from these findings that streptocolysin, and hence also the products of other bacteria, may be different if produced in different media.

These experiments were carefully repeated, but Besredka's findings could not be verified. It was found that streptocolysin produced in goat serum hemolyses corpuscles of goat, sheep and chicken just as does that produced in human serum or in rabbit serum. The latter, however, hemolyses in a much shorter time than do either of the other two.

Many bacterial toxins are destroyed by heating to 56 C. for one-half hour, but that is not the case with streptocolysin. It may be heated to 60 C. for one-half hour without being inactivated. If heated to 65 C. for one-half hour its value is greatly impaired, but it is completely inactivated only by heating to 70 C. for 2 hours. If once inactivated, it can not be reactivated by the addition of complement. It is inactivated by leaving in the incubator at 37 C. for 5 days. If kept at room temperature it is still hemolytic at the end of two weeks, and if preserved in an ice-chest it remains active for more than a month. Freezing for a short time does not destroy it.

It is non-dialysable. Five c.c. of the filtrate were kept in a dialyser for three days, but when taken out it hemolysed as rapidly as it did before. Digestion with pepsin for 14 hours at 39 C. destroys it.

Turning to the consideration of the nature of streptocolysin, we may compare its behavior with that of other hemolysins, the nature of which has already been determined. Is it an alkali, which was recently shown by Jordan[12] to be the nature of pyocyanolysin? This question is answered readily in the negative because streptocolysin is faintly acid to phenolphthalein (0.3 per cent.), and it is destroyed by heating to 70 C. for two hours.

Is it one of those complex substances depending on the combined action of an intermediary body and complement, which was shown[13] to be the constitution of many natural hemolysins as well as of those found in the sera of animals which have been repeatedly injected with the red cells of an animal of a different species? This question also may be answered in the negative from the following considerations:

(a) Complement, as it is ordinarily known, is destroyed by a temperature of 56 C. in one-half hour. Streptocolysin may be heated to 65 C. for one-half hour without being destroyed, and when it is inactivated by a still higher temperature it can not be reactivated by the addition of complement. Hence we may conclude that we are not dealing here with complement as it is ordinarily found.

(b) In the case of natural hemolysins and those produced by immunization, the intermediary body alone may be bound to the corpuscles and thus removed from the serum. This is done by keeping a mixture of corpuscles and serum at a temperature near 0 C. for 30 minutes or more, and then centrifugalizing and drawing off the clear serum. If now the corpuscles are washed in a cold salt solution and incubated no hemolysis takes place. The addition of complement to these corpuscles brings about hemolysis. If, on the other hand, fresh corpuscles are added to immune serum which has been treated in the cold with an excess of corpuscles no hemolysis is observed.

The behavior of streptocolysin is quite different from this, as is shown by the following experiments:

12. Trans. Chicago Path. Society, 1902, v, 175.

13. Ehrlich and Morgenroth: Berlin. klin. Wochenschr., 1899, xxxvi, 6.

1. Mix one-half c.c. of a thick suspension of washed rabbit corpuscles with 2 c.c. of streptocolysin and keep the mixture below 3 C. for 5 hours. No hemolysis is observed. Centrifugalize in a cold place, draw off the clear serum and wash the corpuscles five times in salt solution. Now suspend them in 2 c.c. of salt solution and incubate. No hemolysis takes place, even after the addition of complement. Add fresh corpuscles to streptocolysin which has been treated in the cold with an excess of corpuscles, and hemolysis is produced by incubating for 2 hours.

2. Make a similar mixture of streptocolysin and corpuscles as was used in experiment 1 and keep it at a temperature of 6 C. for 3 hours. No hemolysis is observed. Centrifugalize in a cold place, draw off the clear serum and wash the corpuscles five times in cold salt solution. No hemolysis takes place during the washing if the temperature is kept below 6 C. Suspend the corpuscles in salt solution and incubate for 2 hours. Marked hemolysis will now be observed.

Streptocolysin, therefore, is not similar to the immune hemolysins; it is not a substance depending on the combined action of an intermediary body and complement.

I have carried the study farther in order to determine whether or not streptocolysin is similar to diphtheria toxin, tetanolysin and staphylolysin. These substances, as was shown by Ehrlich,[14] Madsen,[15] and Neisser and Wechsberg,[16] respectively, are composed of a complex molecule in which are linked together a haptophore and a toxophore group. By means of the haptophore group, which may be active at a low temperature, the toxin attaches itself to the cell, and not till then can the toxophore group exert its destructive effect over the cell, and then only at a temperature approaching that of body heat.

This, as we have just seen, is precisely the behavior of streptocolysin. At a temperature of 6 C. it may be bound to the red corpuscles so firmly that it can not be removed from them by repeated washings, but hemolysis takes place only after the temperature is raised considerably above this point—best at 37 C.

The existence of a haptophore and a toxophore group is still more strongly indicated by the following experiment: Take 2 c.c. of streptocolysin, add one-half c.c. of a thick suspension of washed rabbit corpuscles and keep the mixture at the temperature of 6 C. for 3 hours. No hemolysis takes place. Centrifugalize in a cold place, draw off the clear fluid and wash the corpuscles five times in cold physiologic salt solution. Now divide them into 3 equal portions, (a), (b) and (c). To (a) add 2c.c. of salt solution; to (b) add 1 c.c. of heated chicken serum and 1 c.c. of salt solution and to (c) add 2 c.c. of salt solution to which has been added 1 drop of a 5 per cent. solution of zinc chlorid. Incubate the tubes and observe in 5 to 6 hours. There is marked hemolysis in (a) and (b), but no trace of hemolysis in (c).

We have already seen that heated chicken serum is antihemolytic, if it is added to an equal volume of streptocolysin, and corpuscles added later. But this serum is no longer capable of preventing hemolysis if added to corpuscles which have been treated with streptocolysin at 6 C. for 3 hours and then thoroughly washed, although hemolysis may still be prevented at this stage by the addition of a trace of zinc chlorid or zinc sulphate. It seems now that this peculiar behavior of streptocolysin is best explained by the assumption that we are dealing here with a haptophore and a toxophore group which are linked together in one molecule. The chicken serum, therefore, either destroys the haptophore group, or something in it combines with this group and saturates it, so that the streptocolysin can not become bound to the corpuscles. The toxophore group remains unaffected. According to the theory, this should prevent hemolysis, and the experiments have shown this to be the case. Zinc chlorid, on the other hand, is capable of arresting hemolysis after the streptocolysin has been bound to the corpuscles, and this effect seems to be due to its action on the toxophore group. It must be added that corpuscles which have been treated for 1 hour with a weak solution of zinc chlorid and subsequently washed, are readily hemolysed if mixed with streptocolysin and incubated.

Several attempts have been made to immunize rabbits against streptocolysin, in the hope of producing antistreptocolysin in their sera, but, so far, these experiments have been unsuccessful. All of the rabbits died after receiving from 2 to 5 injections of 0.5 c.c. each. This work is being continued, and will be reported more fully at a later date.

The toxicity of these filtrates was further determined by injecting seven rabbits with varying quantities. Six of these died, while one receiving 2 c.c. intravenously is alive four weeks after the injection. Cultures made from the heart blood, liver and spleen of these animals were sterile. This work also is being continued, and will be reported in a subsequent paper.

CONCLUSIONS.

Virulent streptococci, when grown in heated rabbit serum (and other sera), produce a hemolysin which destroys the red corpuscles of many animals.

This hemolysin is an organic substance which is destroyed by heating to 70 C. for two hours.

It gradually deteriorates if kept at room temperature, but may be preserved in the ice chest for a much longer time.

In the incubator it deteriorates very rapidly.

It is destroyed by peptic digestion.

It is non-dialysable.

It is composed of a haptophore and a toxophore group, which are firmly bound together. The haptophore group may be neutralized with chicken serum and the toxophore group is destroyed by zinc chlorid.

The sera of some animals contain antistreptocolysin.

A weak solution of formaldehyd has antihemolytic properties.

The filtered cultures of a virulent streptococcus, in heated serum, are toxic for rabbits.

I desire to take this opportunity to thank Professor Hektoen for suggestions and encouragement.

14. Ehrlich: Deut. Med. Wochenschr., 1898, xxiv, 597.
15. Zeitschr. f. Hyg. u. Infektionskr., 1899, xxxii, 214.
16. Ibid., 1901, xxxvi, 299.

In the Medical Society.—These rivalries, dissensions, jealousies and controversies can be softened, and professional friendships be formed and cemented; there you can find opportunities for pleasant, social intercourse with worthy men. There you can also silently measure the height and depth of your medical contemporaries, and see the difference between the serious and the superficial thinker, the convincing and the faulty logician, the judicious and the injudicious, the alert and the stupid, intellectual giants and mental dwarfs; there you can also estimate the influence of pleasing actions and deportment, and the intellectual and moral worth of those who command respect, and discover and learn to avoid the glaring imperfections of others who do not—and in many other respects learn effectually to separate the chaff from the wheat. —"*The Physician Himself*," by Dr. D. W. Cathell.

Special Article.

THE PURIFICATION OF WATER SUPPLIES BY SLOW SAND FILTRATION.

(*Continued from page 911.*)

III.

WATER FILTRATION IN THE UNITED STATES (CONTINUED).

B. THE ALBANY FILTRATION PLANT.

The Albany plant is the largest of its kind now in operation in this country and also deserves consideration from the fact that the best and most modern experience

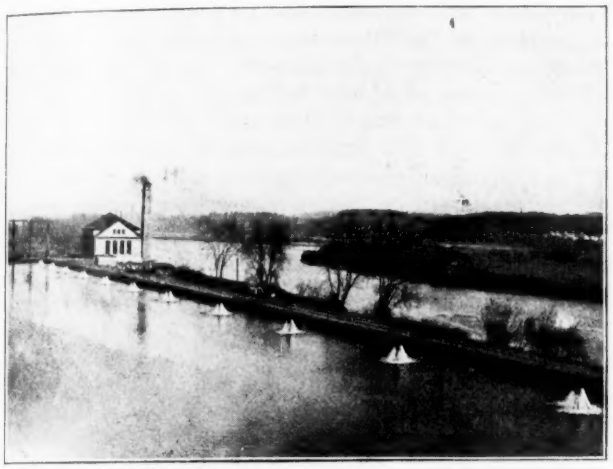

Fig. 3.—General view of Hudson River, pumping station and sedimentation basin, Albany water works.

was utilized in its construction. The sanitary results flowing from the operation of this filter are especially noteworthy since before filtration the water had proved highly injurious to the public health.

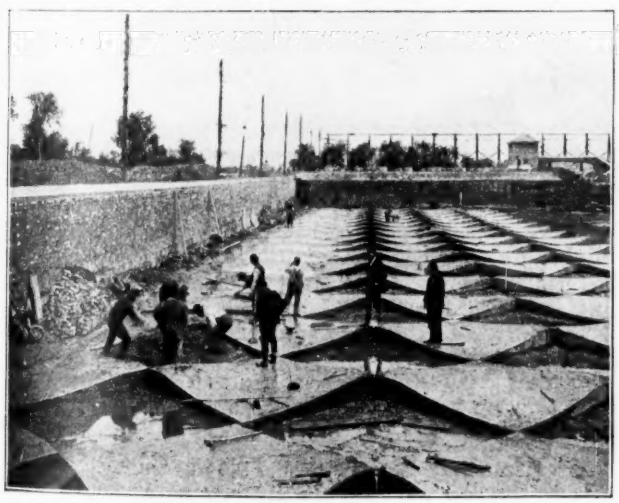

Fig. 4.—Construction of filter basin. Laying water-tight bottom.

The city of Albany, N. Y., with a population of about 100,000, is situated on the Hudson river about eight miles below the mouth of the Mohawk. The total urban population in 1900 on the watershed above Albany was about 376,000 and, including the rural population, amounted to 80 per square mile, or somewhat less than the number on the Merrimac watershed above Lawrence (104). Before the establishment of the filtration plant the raw water of the Hudson river constituted the main supply of the city. The opportunities for pollution at Albany were even more grossly conspicuous than at Lawrence. Only four miles above the water intake, the city of Troy, with a population of 60,651, poured its untreated sewage directly into the Hudson river and, in addition to this source of flagrant contamination, the city of Albany was guilty of the monstrous sanitary blunder of fouling its own nest. Although the majority of the Albany sewers entered the river below the intake, the tidal currents, which at low water make themselves felt as far up the river as Albany, would at times sweep the city's own sewage up stream and into the water intake. The freshness of the sewage, both

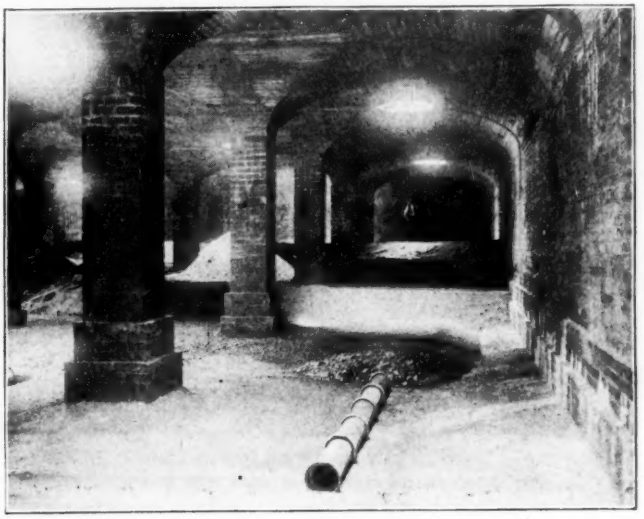

Fig. 5.—Interior of filter bed, showing roof, underdrain and layer of sand and gravel.

from the Albany sewers and from the close-lying city of Troy, rendered the pollution at Albany much more dangerous than was indicated by the simple proportion of "organic matter" in the river water. In view of these

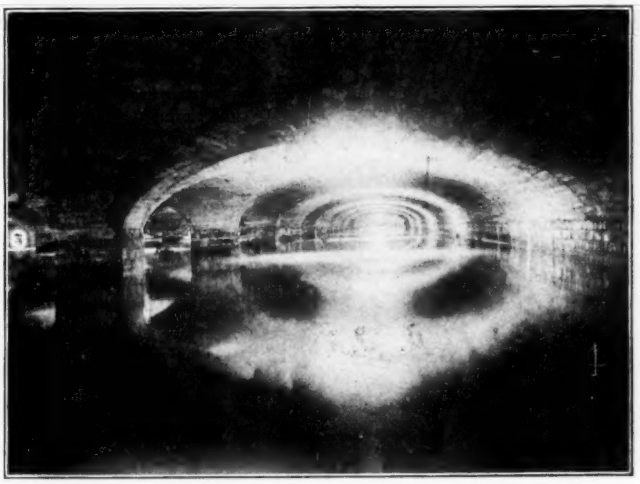

Fig. 6.—Interior of filter basin during operation.

circumstances it can not excite amazement that typhoid fever prevailed at Albany to an alarming extent, and that the city enjoyed the distinction of maintaining one of the highest death rates from typhoid fever in the United States.

The Albany filter was built in 1898-9 and was completed Sept. 6, 1899. A portion of the city supply—about two-sevenths—is still derived by gravity from small lakes and reservoirs, so that it is impossible to draw entirely precise conclusions in regard to the rela-

tive effect of filtered and unfiltered water. The apparent influence of the filter in reducing typhoid fever in Albany will be considered presently.

The Albany filter was constructed in an economical and highly efficient fashion. The plant consists of a pumping station, where the water is pumped from the "back channel" of the Hudson river into a sedimentation basin with a capacity of about 14,000,000 gallons. From the sedimentation basin the water passes to the filter beds, eight in number and provided with covers of

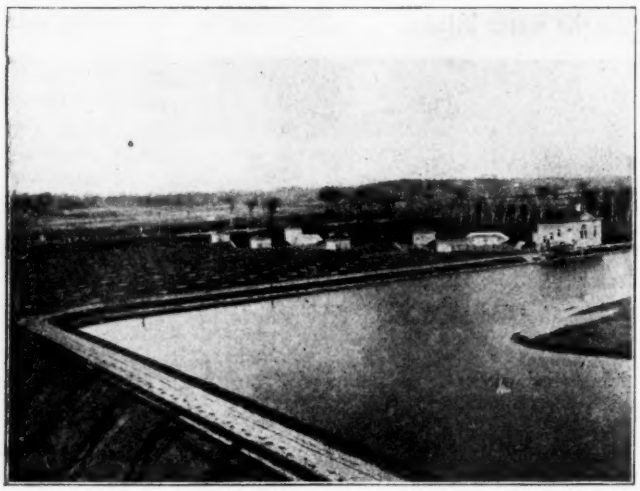

Fig. 7.—General view of completed sedimentation basin, central comb covered filter (with ventilators showing) and laboratory.

vaulted masonry. The cost of the covers formed as much as 30 per cent. of the total cost of the filter, but the unfortunate experience of Lawrence, which we have already recounted, and of other places have supplied abundant evidence that in a cold climate the expenditure for covers is warranted by all considerations of economic and efficient management. It may be said in passing that the total cost of the Albany filters was much less

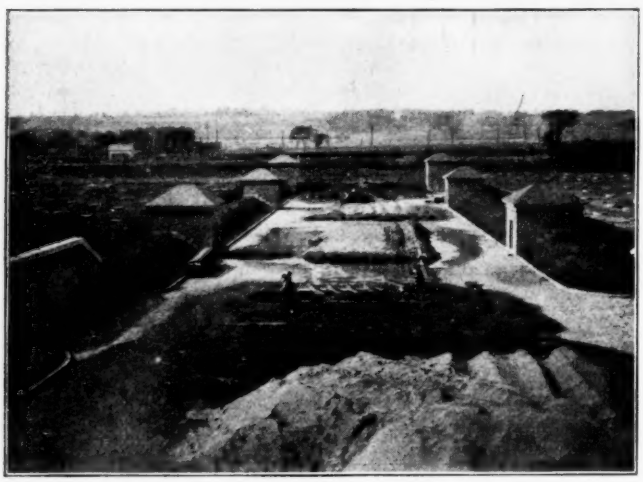

Fig. 8.—Central comb and gate-house, sand washing in the foreground.

—$45,600 per acre, including covers—than the average figures derived from various European construction accounts. It must be admitted, however, that at Albany the site and other conditions were especially favorable and that at the time when the filter was built the market for the materials of construction was at a much lower level than at present.

One particular in which the Albany plant departs advantageously from the older European type of filter is in the specially careful arrangement of the layers of gravel on which the sand rests. The whole gravel layer is considerably thinner than in the older works and is composed of three strata of graded sizes. The use of gravel of different sizes prevents the upper layers from being washed into the lower ones, and is regarded as being a highly commendable feature of the Albany plant. The pure water reservoir, which is rather unusually small, and the ingenious and novel method of controlling the rate of filtration involve other features of engineering interest which need not be here considered.[6]

The Hudson river water, as regards turbidity, occupies a position midway between the very clear waters of New England and the muddy waters of the Middle West. When high turbidity appears in the water it persists longer than in the Merrimac river. In respect to pollution, the quality of the Hudson river at Albany is far below the average of surface waters that are safe for drinking in a raw state. The bacterial content is high (Table 3), and the unmistakable indications afforded by the typhoid fever death rate show that much of the organic matter in the water is sewage of recent origin.

The amount of water filtered between scrapings, which affords some clew to the nature of the water filtered,

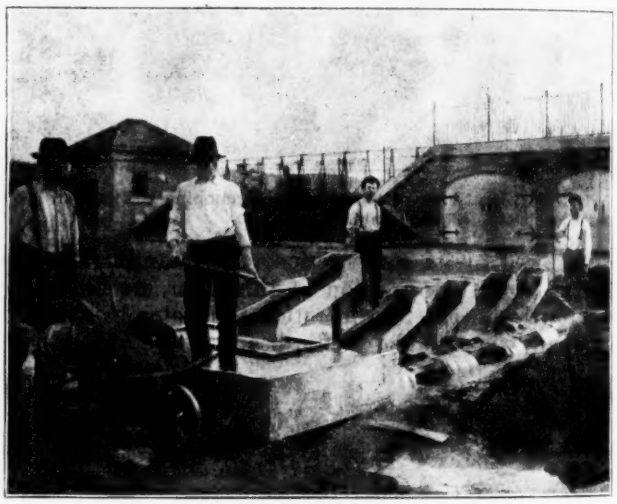

Fig. 9.—Sand washing.

averaged in 1901 about 68,000,000 gallons per acre, or about 47,000,000 per individual filter bed. The average number of days between scrapings was about 25. The bacterial efficiency of the plant is shown in the following table:

TABLE 3.

Year.	Bacterial Count—Average per cc. In Raw Water.	In Filtered Water.
1900	33,600	265
1901	47,800	470
1902 (nine months)	25,500	134

Attention may be called to the large number of bacteria in the raw water of the Hudson at Albany as compared with the Merrimac water. The percentage removal appears from the averages to be about the same as at Lawrence, although the actual number of colonies appearing in the effluent are somewhat greater at Albany. Averages, however, are notably misleading, as shown by the following table giving the results for a single year:

6. We are indebted to Mr. Allen Hazen, the designer of the Albany filter, for his courtesy in allowing us to reproduce some photographic views of the Albany filter in various stages of construction and completion. Certain of the general features of interest common to all modern filters are shown in these photographs, as well as the special features of the Albany plant.

TABLE 4.

1901.	Raw Water. Average.	Pure Water. Average.
January	71,400	300
February	105,100	2,117
March	123,700	1,601
April	107,600	276
May	26,500	92
June	15,800	106
July	7,700	39
August	8,300	42
September	7,600	46
October	4,350	49
November	21,635	290
December	74,100	680

It will be observed that during the greater part of the year the number of bacteria in the effluent is very much below the average for the whole year. The high numbers recorded during the winter months appear to be due to the fact that the filter is forced beyond its legitimate capacity to meet the excessive consumption or waste of water in cold weather. The operation of the filter beds in winter at a rate far above their normal capacity causes a falling off in the bacterial efficiency.

The effect of the operation of the filter on the death record in Albany has been marked. The following table shows the average number of deaths from typhoid fever during the ten years preceding the opening of the filter, and the corresponding number of deaths since the filter was put in operation:

TABLE 5.

DEATHS FROM TYPHOID FEVER IN ALBANY BEFORE AND AFTER THE OPENING OF THE FILTER.

Months.	Average No. of Deaths for 10 Years Prior to Opening Filter.	1900.	1901.	1902.
January	11	3	2	2
February	11	1	3	3
March	12	3	1	2
April	9	5	1	1
May	4	4	1	2
June	4	1	3	1
July	4	3	0	1
August	7	6	3	4
September	6	4	4	2
October	4	5	0	0
November	5	4	0	0
December	7	0	1	0
Total	84	39	19	18

A comparison of the cost of operation of the Albany and Lawrence plants, together with that of two smaller sand filters, is given in the following table:

TABLE 6.

COMPARISON OF COST PER MILLION GALLONS OF OPERATION OF FILTERS AT LAWRENCE, ALBANY, POUGHKEEPSIE AND MT. VERNON.

	Lawrence. 1895-1900	Albany. 1899-1900	Poughkeepsie. 1877-1900	Poughkeepsie. 1898-1900	Mt. Vernon. 1895-1900	Mt. Vernon. 1896-1900
Based on period of...	6 years.	501 days.	24 years.	3 years.	6 years.	5 years.
Average total cost...	$8.05	$1.66	$3.27	$2.42	$3.16	$3.33
Average cost of removing ice and snow	2.27	.....	.....	0.47	.....	0.35
Average cost, minus snow and ice....	5.78	.....	.....	1.95	.....	2.98

(To be continued.)

Clinical Report.

A CASE OF ACCIDENTAL ELECTROCUTION FROM ORDINARY ONE HUNDRED VOLT ALTERNATING LIGHTING CURRENT.

C. VAN ZWALUWENBURG, M.D.
RIVERSIDE, CAL.

To those who study the effects on the system of electric currents the following record of death from an alternating lighting current of only 100 volts may be of interest:

S., a carpenter, well built, stocky, about 5 feet 9 inches, weighing about 165 pounds, was at work repairing a building in Riverside, Cal., about 2 o'clock p. m., Aug. 11, 1903. The building, a two-story block with flat tin roof, had been scorched by fire April 22, 1903. S., with two companions, was making repairs in the attic immediately under the roof in a space only about 4 feet high, between ceiling and roof joist. He was perspiring very freely—the temperature there must have been about 100 F., with no air stirring. As he crouched on his knees and reached over to drive a nail into a studding he threw his head back just enough to bring the occiput in contact with a wire running to a drop light in the ceiling. The insulation had been burned away and in his condition of extreme perspiration, his clothing soaked, all the conditions for transmission of current were at their best. He was probably on a gas pipe, which made an excellent contact for grounding the current. At the instant of contact he made an outcry as though he had received some slight injury, then straightened backward in a general convulsive movement until his body lay in extreme opisthotonos, having carried the wire down from its fastenings, but continuing the contact at the same point.

The companion nearest him rushed to his assistance, received a considerable shock from handling the wire, but succeeded in removing the victim from contact in from 15 to 30 seconds. It was between 5 and 10 minutes before he could be brought down a ladder to the floor, during which time he was said by his companions to gasp several times. By this time Dr. Parker had arrived and at once began artificial respiration, which was continued systematically with tugging on the tongue for one hour, but no further signs of life were elicited at any time. I arrived about 15 minutes after the accident occurred. Rubbing and applications of hot and cold water and hypodermics of strychnin, digitalin and nitroglycerin were also used.

The only evidence of injury was a slight burn about 3/16 of an inch wide and about 2½ inches long, beginning at a point about 1 inch back of the tip of left mastoid and extending backward and upward into the hairy scalp to a point about midway between the posterior inferior angle of the left parietal bone and the median line of the occiput. The burn was very superficial, scarcely through the cuticle.

Our city electrician was promptly on hand and made a careful search for cross wires which might have carried in a heavier current, but none could be found, and he declared after testing the current that the only charge Mr. S. received was the ordinary lighting current as distributed to individual or chandelier lights. This current is the ordinary lighting current, 100 volts, varying slightly and occasionally perhaps reaching 110, run from a 50 cycle 6,000 alternation system.

The explanation of the fatal effect of so light a current must be:

1. The point of contact at the base of the brain.
2. The probable grounding through the gas pipe.
3. The absence of resistance in the skin on account of its thorough saturation with saline water from extreme perspiration.
4. The length of time contact continued on account of the body falling on the wire.

I find very little literature on this subject of the strength of current necessary to cause death, and that is my reason for reporting this case.

This report has been submitted to Dr. A. S. Parker, Dr. C. S. Dickson, the coroner who took the testimony in the case, and Mr. F. A. Worthley, our city electrician in charge of the lighting plant.

Needs Investigation.—The *Alienist and Neurologist*, calling attention to the king snake, whose assault no other snake can withstand and which is immune to the poison of the cobra and of the rattlesnake, asks: "Is the blood of the king snake antidotal to other snake poison? Here is a suggestion for the laboratory of experimental toxicology. Toxicological therapeutists may find in the serum of the king snake an antidote for the sting of the cobra, and the rattler and other venomous reptiles."

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

103 Dearborn Avenue . . . . . Chicago, Ill.

Cable Address . . . . "Medic, Chicago"

Subscription price . . . . . Five dollars per annum in advance

SATURDAY, OCTOBER 17, 1903.

A UNITED PROFESSION IN NEW YORK STATE.

The grounds for discord that have so long existed between the members of the profession of New York state have been removed, and there is no longer any reason whatever why there should be two opposing organizations, each having the same objects. That this fact is realized is shown by the recent action—as reported in our last week's issue—of the New York State Medical Association, and harmony in the near future seems to be well assured.

The action of the council and fellows of the New York State Medical Association in appointing a committee with full powers to meet with a similarly qualified body from the Medical Society of the State of New York has been met by the latter body, and consequently we may hope for immediate measures to consummate the union of the two organizations. There may be some difficulties, or rather minor details, for adjudication by the committees, questions of what should be of comparatively slight importance, but nothing that ought to in any way prevent or seriously delay union. The time has now arrived for individuals to lay aside personal feelings, jealousies and selfishness, if anything of the kind still remains, for the sake of the good of all. There is now no real grievance; no principle whatever involved, and we are sure that no one desires schism for schism's sake alone.

Whatever there may have been in the past to excite bad feeling should be ignored; a disunited medical profession is an evil that all should strive to overcome. We have no expectation, however, that there will be even a minimal percentage of members of either of the state bodies that will take any exception to the proposed reunion. We have full faith in the members of the committees on both sides, as broad-minded men having the best interests of the medical profession at heart, and believe that they will let nothing stand in their way in bringing about the desired result.

With a united profession acting as a unit in the state the possibilities for advancing medical interest and forwarding the necessary measures, legislative and otherwise, for the protection of the public, as well as for the welfare of our profession, will be doubled. We know from the activity of the bodies separately what they can do when united. It is union, not competition—with its accompanying bad feeling and jealousies that have existed in the past—that is desired. We sincerely hope that there will be no serious difficulty or delay in bringing about that harmony in the Empire state which has for years been so anxiously hoped and watched for by the profession of the whole country, and the lack of which has been a misfortune to all concerned. Union must come; to delay it is worse than folly.

DRUG HABITS.

In the October number of the *Journal of Pharmacy* is an interesting article by Messrs. Eberle and Gordon of the committee appointed by the American Pharmaceutical Association to report on the acquirement of drug habits. They give the results of a statistical inquiry which has been instituted, but which is necessarily somewhat incomplete. There is more of interest in their general remarks on the subject, since they are based largely on personal knowledge.

The report shows that the opium habit is markedly increasing; the majority of the class known as habitual criminals are opium habitués. The reporters state that the drug habit has alarmingly increased in the Army and Navy and that opium smoking has been acquired by some of our soldiers in the East. In the Navy this method of taking the drug is less common, but the habit of opium eating has been acquired to some extent in the intercourse with natives of foreign countries. It is encouraging to note that not a single case of the drug habit coming from the prescribing of opium by medical officers could be recalled; opium and the allied drugs are very guardedly and carefully used by the Army and Navy medical officers. An unfortunate percentage of the members of the hospital corps have drifted into the habit from the constant opportunity in handling the drug.

That part of the report which refers to the use of cocain and the cocain habit shows a worse state of affairs. The drug is sold undisguisedly in many drug stores and the druggist buys it in 100-ounce lots, sometimes as often as once a month. One drug store in Philadelphia which does little prescription and no hospital business, is particularly mentioned, though not by name, and is referred to as only one instance out of many.

The effects of the cocain habit are not so generally known as are those of morphin, but there is nothing yet discovered that has such a baneful effect on the user. One of the reporters says that he has seen the drug literally "turn a bright high-principled man into a sneak thief and liar absolutely without regard for morality or principle. One redeeming feature is that the habitual use of cocain seems to lessen sexual ability and desire, so there is less danger of its transmission by heredity." Nine-tenths of the cocain habitués seem to have acquired the habit by the use of patent medicines or prescriptions, and it is rapidly supplanting the use of morphin among men and women of the "under world." The importation

of the cocain salts has increased from $176,948 worth in 1901 to $254,704 in 1902 and $199,826 for the first nine months of 1903. Averaging $3 per ounce as the value of cocain, this gives us an increased importation of 25,000 ounces in 1902 and over 22,000 ounces for the nine months of 1903, a fact which speaks volumes in itself. The use of smoking opium is also increased in a similar manner, but the same was not so true of the morphin salt in 1902, but it has greatly increased in importation in the present year.

The need of legislation in regard to this matter should be emphasized. Something must be done; we have cocain laws in a few states and city ordinances in certain localities, but thus far practically little has been done to stop the baneful habits in this way. The amount of cocain, for example, that can be legitimately used for medicinal purposes certainly bears very little proportion to the total imported amount now used, and an increase such as is represented above is a very bad omen for the future of our population. National legislation is certainly required; the United States government permits the importation of smoking opium for no better reason than the vender has for selling it, and it is a national disgrace that such is the case. Over 100,000 pounds of opium for smoking purposes were imported last year, and the importation is increasing each year. If matters go on as at present the time will come when there will be as important a business interest at work in the matter of drug selling and encouraging the habits as already exists in the case of alcohol.

Any new drug which can affect the nervous system seems to obtain its habitués. The heroin habit has made its appearance, headache remedy habits are reported, diarrhea remedies are reported habitually used by a large number who sooner or later become morphin or laudanum users. Unfortunately, a large number of cases are reported as directly due to careless prescribing by physicians. Physicians must be guarded and careful in the use of such remedies and must discourage in every possible way the use of proprietary remedies containing them; we must work with all our might for national and local legislation restricting the use of the habit-producing drugs and for the suppression of drug habits.

STOKES-ADAMS DISEASE.

In spite of the fact that this remarkable clinical condition was described by Adams in the Dublin Hospital Reports as early as 1827 and much more fully by Stokes in his article entitled, "Observations on Some Cases of Permanently Slow Pulse," in the *Dublin Quarterly Journal of Medical Science* in 1846, too little attention has been paid to it by the profession at large—so little noticed, indeed, that many good practitioners of to-day scarcely know what is meant by the term.

The disease, or rather symptom complex—for the anatomic lesions are not constant nor the etiology uniform—is, however, by no means an infrequent one, and it is characterized by a group of symptoms which permit it to be easily recognized. The patient suffers from attacks of syncope, often described as "apoplectic attacks," associated with a very slow pulse rate—28 or 30 beats to the minute. The slow pulse may be due either to true or false bradycardia; occasionally there may be complete cardiac arrest for as long as half a minute, after which the heart again begins to beat. Accompanying the more severe attacks there is usually marked involvement of the vasomotor system, revealed by pallor, vomiting and sweating, and sometimes by numbness and tingling—symptoms resembling closely those which occur in angina pectoris.

The nervous features of the disease are those which are most troublesome to the patient, and concerning which he consults a physician. Complaint is made of attacks of dizziness and staggering without known cause, or there may be sudden "fainting spells" with complete loss of consciousness. In some instances the symptoms resemble closely an attack of apoplexy; there is deep coma with loud, stertorous breathing and facial congestion, but the pseudo-apoplectic nature of the attack is shown by the absence of consecutive paralysis. Occasionally actual epileptiform seizures occur.

Three groups of cases are distinguished: 1, A postfebrile group; 2, a neurotic group, and 3, an arteriosclerotic group. By far the majority of the cases met with belong to this third group. The pathology of the affection is as yet quite unknown. The cases are largely confined to the period of advanced life, though occasionally a young individual is attacked. The prospect of recovery, once the severer nervous symptoms have appeared, is unfavorable. The attacks may go on occurring, however, for years. Death is, as a rule, sudden in one of the seizures. The most that can be done in the way of treatment is to attempt to prevent the progress of an underlying arteriosclerosis when that exists. In the syncopal attacks nitrite of amyl may be used.

Stokes-Adams disease has in recent years begun to attract the attention of a number of the ablest clinicians in this country and abroad, and it is to be hoped that we shall ere long have new light thrown on its etiology and pathogenesis. Among the more valuable articles dealing with the subject are those by Huchard[1] in France, Hoffmann in Germany and Osler[2] and Edes[3] in this country.

GRANTS FOR SCIENTIFIC WORK.

One of the first results of the small grants given by the American Medical Association to promote scientific research is embodied in the article by Gustav F. Ruediger in the present issue of THE JOURNAL. It appears that pathogenic streptococci have the power, under certain conditions, of producing a substance that causes laking and destruction of red corpuscles (hemo-

1. In his "Traité des maladies du coeur."
2. Lancet, Lond., Aug. 22, 1903.
3. Phil. Med. Jour., 1901.

lysis). In the case of rabbits, this laking occurs during life in the course of streptococcus infections. In view of the frequency and of the gravity of streptococcus infections in man, this being probably our most frequent secondary infection and certainly the principal element of danger to life in the course of smallpox and scarlet fever, any definite advance in our knowledge of the pathogenic action of streptococci is most desirable. Now the production by streptococci of a definite poison to red corpuscles explains very satisfactorily the grave anemia that commonly develops in streptococcus infections. Ruediger shows that streptocolysin is a single substance, thus differing from the majority of hemolysins which depend for their action on the combination of two different elements, the intermediary body and the complement. Streptocolysin is in nature like the diphtheria toxin and tetanus toxin.

This fact having been established, further work may develop other similarities between these bacterial toxins, e. g., the property to cause the development of specific antitoxins. Streptococcus infections have proven to be a serious stumbling block in the way of successful treatment by antiserums. Success perhaps awaits more exact knowledge of the modes in which streptococci cause their pathogenic effects. At present the exact mechanisms of streptococcus infections are not clearly understood, and on this account they invite to continued, persistent, detailed investigation, and it is to be hoped that work of this kind may be stimulated by the Association grants.

Grants for research are probably the most fruitful method of investment for the surplus funds of the Association. The returns will consist, first, in the immediate results of the particular investigations made possible by the grants and, secondly, in the encouragement thus given to the development of investigators. "It is in the multitude of scientific workers that there is hope. The man of genius is a rare bird, and we must have a numerous class from which to produce him." Perchance the grants given by the Association may prove, sooner or later, the welcome means of discovering some man of genius and starting him on a career of epoch-making investigation. This phase of the setting aside of funds for research should be kept prominently in view by the committee having the matter in charge. When a grantee demonstrates his ability to produce definite results from actual, original investigation, let him receive all possible encouragement, to the end that he may be able continuously and persistently to push his work forward.

THE EVOLUTION OF THE COLOR SENSE.

A number of years ago Gladstone theorized—from the poverty of words indicating color in ancient Greek literature—that the color sense, as we now possess it, is a comparatively late acquisition. His view was strongly combated at the time and has not since received any general acceptance. It is, of course, impossible to say just what color vision the Homeric Greeks possessed, and we have perhaps no modern races exactly corresponding to them in social and intellectual development.

We have, however, some facts that may be considered as favoring Gladstone's theory; we know, for example, that certain refinements of sensation are cultivatable, and there is some testimony that in some of the lower races the special sensibility in one way or another is not exactly the same as with the more civilized races. Accurate psychometric studies of savages have hitherto been largely lacking, but attention has been directed to the need, and we may obtain data that will decidedly modify the prevalent views on the subject. An indication that such may be the case is apparently afforded by the recently published psychometric studies of the natives of Murray Island, in Torres Straits, by Dr. W. H. R. Rivers, noticed in *Nature,* September 3. His observations are especially significant, for he found the color sense decidedly deficient in these savages, and the objection that only the descriptive terms were wanting was not found valid—sensation was most defective just where the nomenclature was most lacking. The natives generally recognized red and yellow, and green for special reasons, and had names for these colors, but their ideas of blue were very indefinite, and it was confused with blue green or dirty brown. Only the most decided blue tint seemed to make an impression. A curious fact noticed was the complete absence of red-green blindness, and another was the fact that the peripheral retinal perception of blue was most complete, and its visual field the most extensive, which is contrary to the rule. Other senses tested by Dr. River's colleagues showed aberrations which were decided, though perhaps less striking than those for color. Acuteness of hearing was lower than in the white, as were also the pain and weight senses. Tactile sense was more acute, and the visual reaction time slower, while the auditory reaction time was the same as in the European. There was no name for bitter, but the sensation evidently existed.

The savage races of the earth are disappearing rapidly, and the scientific value of such investigations on their psychometric aberrations can not well be over-estimated. It is only by such research that we can even approximately settle such questions as that raised by Gladstone, and the bearings of these points on the early history of our race can readily be appreciated. If followed up and associated with equally thorough anthropometric studies, brain measurements, etc., they may throw light on many questions of development and physiology. They should be more generally made, and should be correlated with every phase and grade of social development from the lowest savages up to the highest uncivilized races, and it may be that practical as well as scientifically valuable results will be obtained. The better knowledge of the evolution of the color sense may lead to methods of its education and betterment and the prophylaxis of color-blindness.

SYPHILIS IN ANTHROPOIDS.

Medical men everywhere will watch with interest the progress of the experiments now being conducted by Metchnikoff at the Pasteur Institute in Paris on the susceptibility of the anthropoid apes to syphilis.[1] It is stated that thus far the French scientist has succeeded in producing a typical initial lesion of syphilis in one animal shipped to him from Liverpool by inoculating it with virus from a secondary syphilitic lesion in man. The celebrated syphilographer, Fournier, has examined the animal carefully and gives it as his opinion that the lesion produced is undoubtedly specific. If these statements are verified, it must be granted that a most important step forward has been made in our knowledge of this most ancient and prevalent disease; for the experience of the last few years has taught us that one of the first *desiderata* for the successful study of an infectious disease is to be able to reproduce it in animals, so that it can be subjected to experimental study and the conditions of experimentation be controlled at will. Hitherto syphilis has been unknown in animals other than man. Attempts have been made repeatedly to transmit the disease to lower animals, but without success. If any animal is susceptible, it is most likely to be found among those highest vertebrates which are so fearfully human in form and whose tissues are presumably chemically most similar to the tissues of man. The French savant has proceeded on this theory and apparently his efforts have been crowned with success. The cost of experimentation on gorillas and allied forms will, of course, be enormous; a single animal sold to the Physiologic Laboratory at Liverpool not long ago brought no less than $1,800 in cash to the importer. But in the investigation of a disease like syphilis, the money should be easily forthcoming as soon as those who have it to give can be assured that its expenditure offers a fair hope that something greater than anything we know yet may be done in preventing the spread, or in promoting the cure, of this frightful disease.

Medical News.

ILLINOIS.

Smallpox at Westfield.—It is reported that smallpox is prevalent in Westfield to such an extent that the public schools have been closed.

Must Report Births.—Section 2 of the new law provides that "every physician, midwife, parent, or householder shall be paid for each report of birth made in the manner directed by the State Board of Health the sum of 25 cents." The law is mandatory and for its violation a penalty of a fine varying from $10 to $100 is provided.

Illinois Mortality for July.—During July, 1903, 4,903 deaths occurred in the State of Illinois, according to the mortality report for that month just published by the State Board of Health. This report is based on the certificates of deaths received in the office of the board from physicians outside of the larger cities of the state in which burial permits are required, from the registration officials of these cities, and from the coroners of the several counties. These certificates were forwarded to the State Board of Health under the provisions of the birth and death law of 1903 which repealed the Act of 1901 requiring a burial permit. The report has been delayed by the failure of several county clerks to furnish physicians and coroners with blank forms for reports of deaths. A few weeks ago the State Board of Health had printed and distributed among the physicans of the state over six thousand books of blank forms, and as a result several hundred belated reports have been received by the board during the past week. The published death-rate is slightly less than that of July, 1902, when 5,107 deaths were reported to the county clerks, but it is the opinion of the State Board of Health that many additional reports for July will be received during the present month. The reports for July, 1902, should be absolutely correct, as it was then obligatory on physicians to furnish a certificate of death before the burial of the body. The ten principal causes of death and the number due to each are given as follows: Gastro-enteritis in infants, 673; tuberculosis, 537 (tuberculosis of the lungs, 447; other forms, 90); accidents, 483; pneumonia, 218; typhoid fever, 88; suicide, 70; diphtheria, 57; whooping cough, 50; measles, 39, and scarlet fever, 32. The reports for July, 1902, showed 681 deaths from gastro-enteritis in infants and 542 deaths from all forms of tuberculosis.

[1] THE JOURNAL A. M. A., October 3, page 861 and previously.

Chicago.

Sherrington Banqueted.—Prof. L. Sherrington, Liverpool, was the guest of honor at a banquet given by the faculty of Rush Medical College, October 5. President Harper introduced Professor Sherrington to the faculty and delivered the address of welcome.

Dispensary for Maternity.—Contracts have been let for a dispensary to be built at the southwest corner of Maxwell Street and Newberry Avenue in connection with the Chicago Lying-in Hospital. It will be three stories high, 25 by 60 feet, and will cost $15,000.

Mortality.—For the week ended October 3, the total deaths were 467, an annual death-rate of 13.26 per 1,000, consumption leading with 55 and acute intestinal diseases coming next with 51. For the week ended October 10 the deaths were 427, an annual death-rate of 11.81 per 1,000, consumption again leading with 49, and being followed by acute intestinal diseases with 46.

Books Stolen from Marine Hospital.—A considerable number of valuable medical books, including Deaver's Surgical Anatomy in 3 volumes and Dennis' Surgery in 4 volumes, have been stolen from the library of the U. S. Marine-Hospital. Each volume has the government stamp on the title page. Should any of these books be offered for sale the surgeon-in-charge, Dr. Charles E. Banks, desires to be informed, that he may recover the books and prosecute the thief.

MARYLAND.

Frederick County Medical Society.—This society has purchased a three-story house in Frederick and will convert it into a hospital and training school for nurses. The board of directors has elected the following officers: President, Dr. William H. Wagner, Woodsboro; vice-president, Dr. D. Edwin Stone, Sr., Mt. Pleasant; secretary, Dr. Henry P. Fahrney, Frederick, and treasurer, Dr. William C. Johnson, Frederick.

Baltimore.

Deaths and Births.—The deaths for the week ended October 10 were 183, which is an annual rate of 16.88 per 1,000. There were 206 births, and 5 deaths from typhoid fever.

Personal.—Dr. Henry Barton Jacobs has returned from Europe.——Dr. Glanville Y. Rusk has been appointed to a position in the New York Pathologic Institute.——Dr. Norman McLeod Harris of the Johns Hopkins Hospital has received an appointment in the bacteriologic department of the University of Chicago.——Dr. E. H. Hume has gone to England.——Dr. Harry O. Wilmot of the City Hospital left, October 10, for Folsom, W. Va., where he will practice.——Dr. Mary N. Browne has been appointed demonstrator of obstetrics in the Woman's Medical College.——Dr. N. G. Keirle, Jr., is pursuing study in a special line of surgery at St. Mark's Hospital, London.——Dr. Albert Shelley has returned from England.

MASSACHUSETTS.

Thousands for Hospitals.—The hospital of the city of Melrose will receive $1,000 from the estate of the late Royal F. Barry. ——The Clinton Hospital Association receives $10,000 by the will of Richard W. Foster.

Smallpox Stamped Out.—Smallpox may be regarded as stamped out of Massachusetts. Very few cases exist within the borders of the state, these few are nearly all imported and no new cases at all are reported for the week ended October 10.

Associated Boards of Health.—The quarterly meeting of the Massachusetts Association of Boards of Health will be held in Clinton October 22. A paper by Dr. Robert W. Hastings, resident physician of the Boston Floating Hospital, on

"Etiology and Treatment of Summer Diarrheas of Infants," will be followed by a description of the great waterworks of the metropolitan water supply. The dam and reservoir, which are located at Clinton, will then be inspected by the association.

Deaths and Diseases.—During the five weeks ended October 10 there were reported 970 deaths in Boston, a decrease from last year of 40 and an average annual death rate of 16.76 per 1,000. Among the prominent causes of death were: Pneumonia, 61; whooping cough, 4; heart disease, 80; bronchitis, 16; and marasmus, 31. One hundred and seventy-four cases of diphtheria, with 19 deaths, were reported; 92 of scarlet fever, with 1 death; 137 of typhoid fever, with 20 deaths; 75 of measles, and 184 of tuberculosis, with 115 deaths.

MISSOURI.

Personal.—Dr. Edward J. Davis, St. Louis, superintendent of Provident Hospital, has been appointed resident physician of the Indian school at Zuni, N. M.

Sanitarium Burned.—At a fire, October 1, which destroyed the private sanitarium of Dr. Benjamin B. Ralph, Kansas City, one patient was killed and five were badly injured. The loss was $4,000.

Pleaded Guilty.—Dr. Walter McKinley, Grant City, charged with having violated the postal laws by sending forbidden matter through the mails, pleaded guilty, concluding "that it was wiser to plead guilty and pay a fine than to go to the trouble and expense of fighting the case."

Forgiven This Time.—Nolle prosequies were entered in the cases of four physicians charged, October 1, with not having registered at the St. Louis health department. This action was taken at the request of the board of health. The physicians were Drs. Oscar P. Hedger, 2628 Osage Street; Harmon Mehrs, 3300 Commonwealth Avenue; Charles McGinnis, 3204 South Jefferson Avenue, and Harry Upshaw, 3762 Morgan Ford Road.

Crusade Against Quacks.—A warrant has been issued against Charles De Meyer, 919 Olive Street, St. Louis, for practicing medicine without a certificate from the State Board of Health. This is the first state case made by the health department of St. Louis in its efforts to purge the city of irresponsible and irregular practitioners.——Mrs. Sylvia Pfeiffer, St. Louis, was fined $25 and costs for failing to register with the board of health, as required by law.

University Year Opens.—The Marion-Sims-Beaumont College of Medicine, the medical department of the St. Louis University, opened for the year, October 1, with an increase in the number of students. Among the additions to the faculty are the following: Dr. B. Meade Bolton, professor of pathology and bacteriology; Dr. Albert C. Eycleshymer, director of the department of anatomy, histology and embryology; Dr. Augustus V. L. Brokaw, professor of operative and clinical surgery; Gustavus D. Hinrichs, professor of chemistry and director of chemical laboratories; Peter Potter, associate professor of anatomy; Herbert P. Johnson, associate professor of bacteriology; James M. Wilson, instructor in embryology and comparative anatomy, and S. Walter Ransom, instructor in research work.

NEBRASKA.

Hospital Closes.—The board of directors of the Fremont hospital decided that the institution could not be made to pay, and it was closed permanently September 30.

Going to the Philippines.—Drs. C. L. and Leta M. Pickett, Tecumseh, sailed for Manila, September 19. They are to be stationed as medical missionaries at Laoag, Luzon, 250 miles north of Manila.

Colleges Open.—The year's work of the Omaha Medical College, the medical department of the University of Nebraska, was inaugurated September 22 at a meeting at which the principal address was delivered by Dr. Henry B. Ward, dean. ——The fall term of Creighton Medical College, Omaha, opened September 22.

Hold Charges in Abeyance.—The State Board of Health, in the case of Dr. Charles W. Downs of Omaha, charged with distributing pamphlets tending to corrupt public morals, has decided to hold the charges in abeyance, on the plea of the accused that he was ignorant of the law, and on his promise not again to offend.

Irregular Fined and Banished.—Salomon T. Metty, who has claimed to be able to cure all diseases, but had not obtained a license to practice from the state medical board, was fined $100 and costs, $26.50, at Nebraska City, September 30. His friends paid the fine, and he was released on agreeing to leave that section of country. At the trial it was brought out that the defendant was a horse-trainer by profession.

NEW YORK.

Sexagenarian Takes Examination.—Among the candidates who appeared at Syracuse, September 18, was a graduate of Denver University, 64 years of age.

College Opening.—The seventy-third session of Albany Medical College was commenced, September 22, with addresses by Dr. Willis G. Macdonald and President Andrew V. V. Raymond of Union University. A portrait of Dr. James H. Armsby, for many years professor of anatomy and surgery, was unveiled. ——The medical department of the University of Buffalo was formally opened, September 28, with an address by Dr. Carlton C. Frederick.

Personal.—Dr. George Blumer, Albany, has resigned as adjunct professor of pathology and bacteriology and has been succeeded by Dr. Richard M. Pearce of Philadelphia, who will have as his assistants Drs. E. M. Stanton, New York, and Charles K. Winne, Mount Wilson, Md.——Dr. Montgomery A. Crockett of Buffalo has returned from a three months' visit to Germany and Switzerland.——Dr. Charlotte B. MacArthur, Rochester, has been appointed assistant physician of the Willard State Hospital, vice Dr. Ernestine J. Hills, deceased.

New York City.

Physician Shot.—Dr. Rodney C. Combes, Corona, Borough of Queens, was shot, October 7, in the right leg by the husband of a patient who recently escaped from his sanitarium.

Cornerstone Laid.—The new building for St. Mary's Hospital, Jamaica, is under construction. The cornerstone was laid September 20; the hospital is to accommodate about 300 patients.

Hundreds Barred.—As a result of medical inspectors' reports the board of health has excluded from the schools 175 children suffering from trachoma, 139 from conjunctivitis, 59 from parasitic diseases, and 3 from skin diseases and one from tonsillitis.

Memorial Hospital Sold.—The Memorial Hospital for Women and Children, Brooklyn, was sold at auction under foreclosure proceedings, September 22, for $96,500. It is understood that the purchase was made on behalf of the Jewish Hospital Society.

Jury Disagreed.—In the suit for malpractice brought by an alcoholic patient against Drs. G. Lenox Curtis and John H. Storer, in which he alleged that he had been seriously injured while undergoing electric-light treatment and had been damaged to the extent of $10,000, the jury disagreed.

Deplore Robert Newman's Death.—At a special meeting of the faculty of the New York School of Physical Therapeutics, September 14, resolutions were adopted bearing testimony to the honesty, courage, and kindliness of the late Dr. Robert Newman, and extending its sympathies to the bereaved family.

Cornell Begins.—On September 30 the work of Cornell University Medical College began for the year with an increased enrolment in the junior and senior years, but with no increase in freshmen, due probably to the higher entrance requirements, which are practically the same as those for admission to the academic department of the university.

Columbia Medical School Opens.—The opening exercises of the College of Physicians and Surgeons were held September 24. Dr. Nicholas Murray Butler, president of Columbia University, presided, and in a brief address of welcome announced the foundation of a special medical library for the medical college. Dr. Walter B. James also spoke on "The Old and the New Medicine."

Official Changes.—Dr. Edward T. T. Marsh has been appointed president of the Board of Police Surgeons, vice Dr. Stephen G. Cook, removed. Dr. Henry P. DeForest has been appointed secretary of the board.——Dr. Frederick A. Jewett, chief of the bureau of contagious diseases, Brooklyn, has been made diagnostician to the department. His successor is Dr. Benedict of Manhattan.

New Contagious Disease Hospitals.—The health department has prepared plans for the building of a hospital to cost $75,000 in the Borough of Queens to accommodate 20 patients; a new pavilion with a capacity of about 200, near the Kingston Avenue Hospital; a scarlet fever building to accommodate 200 patients at the foot of East Sixteenth Street, and a small reception hospital at Richmond.

OHIO.

Fined For **Assault.**—Dr. Ralph E. Brake, Findley, was fined $150 and $28 costs, September 21, for assaulting Walter Herrick.

Western **Reserve Opens.**—The medical department of Western Reserve University, Cleveland, opened October 2 without formal ceremony.

License **Revoked.**—On account of habitual drunkenness, the State Board of Medical Registration and Examination, on October 6, revoked the license of a practitioner.

Hanna **Endows Chair.**—The medical department of Western Reserve University, Cleveland, has received $100,000 from H. Melville Hanna, to endow a chair of research in anatomy.

Rheumatism **Specialist Fined.**—"Dr." D. J. Zilkon, Cleveland, a so-called specialist on rheumatic diseases, pleaded guilty to practicing without a license and was fined $25 and costs, at Lorain, September 25.

Municipal **Sanatorium Opened.**—The new tuberculosis sanatorium at Cleveland was opened October 4, and 32 patients were transferred to it from the City Hospital. There is room for about 60 more patients. The fresh air and diet treatment will be carried on at the institution.

Personal.—Dr. Robert C. Heflebower, Cincinnati, has returned after a visit of five months to Denmark.——Drs. Arthur G. Helmick and William H. Pritchard, Columbus, have been appointed assistant physicians at the Ohio Hospital for Epileptics, Gallipolis.——Dr. William J. Wall, Jr., Cleveland, jail physician, has been deposed.——Dr. William L. Buechner, who has been a member of the Youngstown Board of Health for thirty-three years, has resigned.——Dr. John E. Stemler, Cincinnati, has been appointed receiving physician of the City Hospital, vice Dr. Oliver P. Coe, resigned.——Dr. Ira B. Hunter, Sandusky, assistant surgeon at the Ohio Soldiers' and Sailors' Home, has resigned.——Dr. Madison E. Baldwin, Arcadia, has returned from Europe and has opened an office in Toledo.——Dr. William V. Anderson, Toledo, has been appointed workhouse physician, vice Dr. William S. Walker, resigned.

TENNESSEE.

Personal.—Dr. James M. King, Nashville, has been appointed a member of the board of education.——Dr. C. T. Love, McLemoresville, was thrown from his horse, September 21, and received severe internal injuries. He is now reported to be improving.

Open for **Year's Work.**—The medical departments of Vanderbilt University, the University of Tennessee and the University of Nashville, opened for the season on October 1.——Tennessee Medical College, Knoxville, will open November 2, a month later than usual, and will close June 1.

Faculty **Changes.**—At the University of Tennessee, Nashville, Drs. Robert Caldwell and W. Herman Myers were appointed demonstrators of anatomy, Hon. Nathan Cohn, professor of medical jurisprudence, and Dr. William E. Hibbett, professor of diseases of children. At Tennessee Medical College, Knoxville, Dr. Samuel M. Miller, professor of obstetrics and gynecology, has resigned, and has been succeeded by Dr. A. G. Kyle.

Rogers **Lectureship at Memphis.**—The directors of the Memphis Hospital Medical College have established a lectureship in memory of the late William E. Rogers, M.D., founder of that institution. Once during each session a lecture will be given by a specialist in some branch of medical science. The first lecture will be given about the middle of November by Dr. Charles H. Hughes, St. Louis.

TEXAS.

Yellow **Fever.**—Up to October 10, 172 cases of yellow fever had been reported at Laredo, with 7 deaths.

Epileptic **Colony Open.**—The State Epileptic Asylum at Abilene was ready to receive patients October 1. The building will accommodate about 200.

Personal.—Drs. Thomas B. Bass, Terrell, and J. H. Eastern, Waco, have been elected assistant physicians at the State Epileptic Colony, Abilene.——Drs. George H. Moody, San Antonio, and Frank R. Ross, Austin, have returned after a five-months' stay in Vienna.

College **Openings.**—The thirteenth annual session of the medical department of the University of Texas, Galveston, began October 1. The opening address was given by Dr. James E. Thompson, professor of surgery.——The medical department of Fort Worth University opened October 1.——Dallas Medical College opened for the year on September 28.

Faculty **Changes.**—The Board of Regents of the University of Texas, Galveston, have elected Dr. Alfred E. Thayer professor of pathology to succeed Dr. Allen J. Smith, who resigned to accept the chair of pathology in the University of Pennsylvania. Dr. Thayer was formerly instructor in pathology and bacteriology in the Cornell Medical School, New York, and has held the fellowship in pathology in Johns Hopkins University.——Dr. William S. Carter, professor of physiology, succeeds Dr. Smith as dean of the medical faculty.——At Fort Worth University, Dr. Robert B. Grammar has been made instructor on diseases of children; Dr. M. E. Gilmore, assistant in surgery and demonstrator of anatomy; Dr. William Rounds, assistant in pathology, and Dr. Charles P. Brewer, lecturer on materia medica and pharmacy.

GENERAL.

Boards of Health to Confer.—The eighteenth annual meeting of the Conference of State and Provincial Boards of Health of North America is to occur in Baltimore October 23 and 24. The program includes the subjects of yellow fever, venereal disease, infantile diarrhea, transportation of the dead, vital statistics, reform in county health officials' methods of work, and tuberculosis.

The Union of the Profession in New York.—A special meeting of the Medical Society of the State of New York was held Tuesday evening, October 13, in the Academy of Medicine, to consider the proposition for the union of two organizations, made by the New York State Medical Association.[1] The large hall was well filled, and amid enthusiastic applause and congratulations the society unanimously adopted the following resolution, which was introduced by Dr. B. St. John Roosa:

WHEREAS, The New York State Medical Association, at a special meeting duly assembled, has, by unanimous vote, appointed a committee with full power to meet a similar committee of the Medical Society of the State of New York to arrange for the unification of the two organizations under the corporate name of the Medical Society of the State of New York, therefore, be it

Resolved, That the committee of conference of the Medical Society of the State of New York, already appointed, be given power to vote, and other powers commensurate with, those recently granted the committee created by the New York State Medical Association for the purpose of unifying the two state medical bodies.

Rates to American Public Health Association.—Supplemental to the information in THE JOURNAL, Oct. 3, 1903, page 871, Dr. H. L. E. Johnson, chairman of the subcommittee of this association on railroad rates, states that one and one-third fare to Washington and return for the meeting, October 26 to 30, has been granted by the Canadian, New England, Trunk Line, Central, Southeastern, Western and Southwestern Passenger associations. The Western Passenger Association has granted this rate on the condition that 100 passengers from their territory attend the meeting, therefore the committee advises that if there is doubt that 100 will attend from the western territory, delegates should purchase tickets locally in this territory to some eastern gateway, viz.: Chicago, Peoria or St. Louis, and there purchase one-way tickets with certificates to Washington, D. C. The Transcontinental Passenger Association will sell nine-month return tickets at two cents per mile from Pacific and intermediate points to eastern gateways, viz.: Missouri River points, Chicago, St. Louis, etc., where delegates can purchase direct to Washington, D. C., on the certificate plan. Local ticket agents will explain and advise how to purchase most advantageously and arrangements should be made with them for through tickets and certificates several days before starting.

Army Death Rate Larger.—The mortality from cholera in the Army caused a slight increase in the total death rate during the fiscal year ended June 30, 1903. The Filipinos and Malays in the Army had a higher death rate, but a very low percentage of alcoholism. Venereal disease increased considerably and the loss of the canteen is blamed for this in part. The annual report of Surgeon-General Robert M. O'Reilly says in part, speaking of the above topics:

THE RACIAL ELEMENT.

The enrollment of about 5,000 native Filipino scouts having added a new racial element to the army, it becomes a matter of much interest to study the comparative effects of disease on them and on our white and colored troops. For the whole army, at home and abroad, during the year 1902, the white troops showed an admission rate of 1,706.33 per 1,000 and a death rate of 14.40. The negro troops had 1,897.74 admissions and 24.11 deaths per 1,000, and the Malay scouts 1,707.21 admissions per 1,000 and 24.04 deaths. The white race, therefore, gave the lowest figures in sickness and much the lowest mortality. The black race led in both, although the Malay closely approached it in death rate.

1. THE JOURNAL A. M. A., October 10, p. 920.

LITTLE DRUNKENNESS AMONG NATIVES.

The freedom of the Filipino from the vice of drunkenness is strikingly shown when we find that out of 5,000 men only three individuals were treated for alcoholism in one year, and that while white soldiers were admitted to sick report on account of their own misconduct in the use of alcohol at the rate of 24.78 per 1,000, and colored troops at the rate of 11.70, the Malay scouts showed the extremely small admission rate of 0.62 per 1,000.

MORE VENEREAL DISEASE.

The steadily increasing prevalence of venereal disease is the most discouraging feature in the sick report of the army. During 1902 13,000 admissions were from this cause alone, equivalent to a rate of 160.94 per 1,000. Admissions to sick report from alcoholism in 1902 were slightly in excess of the number (including volunteers) for 1901. A total number of 1,830 cases, equivalent to 22.65 per 1,000 of strength, occurred.

INCREASE DUE TO LOSS OF CANTEEN.

It is impossible not to attribute a large part of the steadily increasing venereal disease of the army to the loss of the canteen, where the soldier, if he so desired, could get his beer throughout the month, but was not subjected to the temptations to intemperance and vice now attendant on the expenditure of a full month's pay at the low resorts infesting the outskirts of our military reservations.

LESS INSANITY.

A slight diminution of insanity occurred in the army during 1902. There were 138 new cases, equivalent to the admission rate of 1.71 per 1,000, which is almost identical with the rate for the decade 1891 to 1900.

CANADA.

A new marine hospital is to be built at Louisberg, N. S., where it is needed because of the increase of shipping.

A New Hospital for Epileptics.—Work has begun on the new hospital for epileptics at Woodstock, Ont. It is expected that the buildings will be ready for occupation Aug. 1, 1904.

An epidemic of smallpox has broken out at Big Pond, a country settlement near Sydney, Nova Scotia. Eleven cases are so far reported, but the disease is said to be of a very virulent type.

Brandon General Hospital.—The new hospital at Brandon, Man., is being erected 36 by 89 feet, of stone and brick, with two stories and a basement. It will contain thirty-two beds and will cost about $25,000.

Progress Toward the Alexandra Hospital, Montreal.—Ground has been purchased and architects have been requested to submit plans for the erection of a complete infectious hospital of four pavilions to accommodate 100 patients.

Personal.—Dr. J. N. Waters, London, Ont., is to take up the work among the farming boys of Central India, succeeding the late Dr. Menzies, who died at Mhow recently, a victim of the plague. Dr. Waters attended Toronto University and graduated from Trinity Medical College.——Dr. Macdougall King, Toronto, has been appointed instructor of physiology in the medical department of the University of Denver.

Hotel Dieu Hospital, Montreal, Report.—There were treated in this hospital during the month of August 603 in-patients and 2,117 out-patients. Of the latter 1,117 were treated in the eye, ear, nose and throat departments. The following is the newly-appointed house staff of the Hotel Dieu: Senior house surgeon, Dr. Bourgeois, and Drs. Ludovic Verner, J. R. Hamelin, G. E. Bedard, Henri Prevost and Eugene Latreille.

FOREIGN.

Italian Congress of Internal Medicine.—The thirteenth Italian congress of internal medicine will meet at Padua, October 29. The questions announced for discussion are "Individuality in Pathogenesis and Etiology of Disease," "Immunity in Acute Infectious Diseases," and "Interruption of Pregnancy in Internal Diseases."

The Approaching International Congress of Gynecology.—It is announced from St. Petersburg that the date of this congress has been definitely set for September, 1905. The czar has taken the congress under his special charge and elaborate preparations will be made to render the fifth international congress a memorable one.

Another Monument to Charcot.—A handsome portrait bust and bas-reliefs have been erected at the French watering-place of Lamalou-les-Bains to the memory of Charcot. The bronze bust is the work of Madame Charcot. The memorial was dedicated with great ceremony on the occasion of the visit of the party of 120 physicians on the "Medical Study Trip" of 1903. The biographic and historic addresses are given in full in the *Progrès Médical*, September 26.

Prophylaxis of Venereal Disease Among Students.—The Prussian minister of public instruction has notified the faculties of the universities that steps must be taken to warn the students against the dangers of venereal disease to health and morals. He suggests as the most appropriate means short public lectures for the students in all departments of the universities, the lecturers to be from the faculties of medicine, philosophy and theology. These faculties are bidden to organize such courses at their earliest convenience. Our medical exchanges remark that the co-operation of the theologians might be dispensed with as the students know well enough the ethical side of the matter but choose to disregard it. The extent of the peril to health, however, is not known to most of them, and in this they need enlightenment.

France Enforces Destruction of Rats on Vessels from Infected Ports.—The French authorities have been aroused by the outbreak of plague at Marseilles to issue more stringent regulations. The alleged disinfection of the bales of rags from Constantinople having proved inadequate to prevent infection of the workmen handling them, the minister of the interior has decreed compulsory destruction of the rats on ships from infected ports. The measures against the rats can be undertaken during the voyage or after arrival before unloading. They must be by means of apparatus whose efficiency has been established by the national health department, and which are to be placed at the disposal of the officers of the ships on arriving, under the surveillance of the local boards of health. A certificate will be issued by the latter when the regulation has been complied with, and the ship may then proceed to unload. Lortet and Teissier have been writing to the Paris lay press urging the uselessness of quarantines as at present conducted if the rats are left unmolested. The generation of carbon dioxid has proved insufficient, as although it kills the rats it leaves the plague bacilli unharmed. They recommend the Clayton apparatus as the best adapted for the purpose. It generates gases fatal to animal life while not injuring nor fading goods. Marseilles is now declared free from the plague.

Benefits from Organization of the Profession at Munich.—The solid, united front presented by the members of the profession at Munich to the sick benefit societies, has resulted in a signal victory. Every society has agreed to their terms and demands. This includes the adoption of the American plan of free choice of a medical attendant, annual remuneration of 4 marks per capita and 12 marks per family ($1 and $3), and the organization of an "arbitration board" for each society, consisting of 2 physicians, 2 non-medical officers of the society and a lawyer not connected with the society. Extra demands on the physicians are to receive extra remuneration. The medical press is congratulating the Munich physicians for this remarkable victory, beyond their most sanguine anticipations. They urge united organization elsewhere as bound in time to produce equally favorable results. An entire column in the *Münch. Med. Wochft.* and almost two in the *Deutsche Med. Wochft.* are now devoted to warning ads cautioning outside physicians not to go to certain towns "without consulting the undersigned." The latter journal has nine such ads, all subsigned by one of the officers of the *Leipziger Verband.* The importance of the question in Germany may be estimated from the fact that 18 per cent. of the total population of the German Empire are compelled to belong to these sick-benefit societies, nearly ten millions in 1900. This is an average of 347.8 members to one medical attendant, and including the rest of the family, 695.6 individuals to each sick-benefit society physician.

Correspondence.

The Nickname "Allopath."

BALTIMORE, Oct. 5, 1903.

To the Editor:—Your editorial, with quotation from the *Boston Medical and Surgical Journal*, which shows that among "4,188 persons employed in the profession of medicine" in Massachusetts, "the number of physicians who are willing to answer to the nickname of allopath was 1,432," is startling, even though qualified by the suggestion that in some cases "an ignorant census-taker" may have been responsible for a wrongful classification. This narrow and restrictive misnomer, introduced in contemptuous terms by Hahnemann in his "Organon" in 1810, however repugnant to physicians in good and regular standing, we may charitably assume was not used in an offensive sense by the census-taker of the State Bureau of Labor Statistics. Not only to the illiterate, but, to a large extent, to the educated classes, the word conveys no significance

except in the negative way of contradistinction from homeopathy. But inconsiderate assent to such misleading characterization of rational medicine by "physicians who are not sectarians" is altogether another matter. Twenty-two years ago, in an essay on "The Prevalent Misuse of the Term Allopathy," read before the American Academy of Medicine, the writer took occasion to say:

> Well-educated and well-bred people, whom we can not charge with intentional discourtesy, whom we can not suspect of any disposition to wound our sensibility, so habitually use the word in common conversation that there is no hope of escape from the infliction except by revolutionary procedure. But this revolution must begin at home. We must aim the first blow of resistance at the foes of our own household. What only stirs our impatience with the unprofessional offender should provoke active resentment against the sinner in our own ranks. There are too many in the household of faith in the attitude of indolent acquiescence in the misuse of the word in question, and even of tacit acceptance of its implied reproach and its transparent falsity.

Similarly inappropriate and inconsistent in this age of unparalleled activity, progress and achievement, is the term "Old School" physician, which is still encountered in some parts of the country in the profession as well as out of it. What have we to do with the old except so far as it concerns the new? The leaders of thought and action are in the forefront of investigation, and the rank and file are imbued with the spirit of advancement. To apply such epithets as "allopath" and "old school" to the faithful workers who are patiently solving the intricate problems before us, who are emancipating medicine, the science and the art, from the mists and shadows, and widening it into the infinite capabilities of new life and larger liberty, is a form of perversity which is exasperating to say the least. And if, as appears from your significant quotation, there are those among us who do not properly resent the obnoxious "pathy" when applied to the comprehensive range and character of our professional objects and labors, and in whose ears such sophistical terms leave no jarring dissonance, there is evidently room for missionary work within our own ranks. So long as the profession itself submits to or winks at such misrepresentation there can be no terms of compromise, no middle ground of tolerance; all that is left is demand for unconditional surrender.

CHARLES C. BOMBAUGH, M.D.

Virginia Medical Society Proceedings.

ROANOKE, VA., Oct. 24, 1903.

To the Editor:—I observe in THE JOURNAL, October 3, that your reporter of the proceedings of the recent meeting of the State Medical Society of Virginia has got things a little mixed, and I hasten to make the correction: There were charges of various kinds preferred against "seven" of the Roanoke doctors, but it appears that not one of these charges was clearly sustained before the judiciary committee, and I can not understand why your reporter singled out my name and omitted the others. While it is true that when I located in this city three years ago I made a few professional announcements through a newspaper of my establishing a private sanitarium here, giving its location and objects, I fail to see wherein I violated in the least degree the true spirit of the Principles of Ethics, more especially since the Virginia State Medical Society permits business cards and professional announcements of private hospitals to appear in the newspaper.

BITTLE C. KEISTER, M.D.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

METHODS OF ITINERANT PRACTITIONERS.

OREGON, Sept. 30, 1903.

To the Editor:—Is it not in bad taste, if not a violation of the spirit of the Principles of Medical Ethics, for members of a state medical society to travel over the country, like traveling quacks, staying one day in a place every month, after giving notice through the local newspapers of the time of their coming? J. O.

STATES AND TERRITORIES RECOGNIZING DIPLOMAS.

NEW YORK CITY, Oct. 10, 1903.

To the Editor:—Please give a list of states and territories having no state board for examination of candidates wishing to practice medicine. Can you furnish it or inform me where to apply? S. G. J.

ANSWER.—The following states and territories recognize diplomas without requiring examination: Colorado, Kentucky, New Mexico, Nevada and Wyoming (also in one tribal division of Indian Territory). In New Mexico scrutiny of the diploma is very strict and only diplomas of a few of the leading institutions are accepted. In other states, as in Colorado, an examination is required if the diploma is not satisfactory, but the lines are not so closely drawn. We annually publish a little book entitled "Laws Regulating the Practice of Medicine in the Various States and Territories." The last edition is revised to July 1, 1903, and may be had for 30 cents.

PHYSICIAN'S WIFE CHARGED FOR LODGE EXAMINATION.

WISCONSIN, Oct. 9, 1903.

To the Editor:—Dr. A and Dr. B have always been on friendly terms. Dr. A is examining physician for an insurance and fraternal order that Dr. B and his wife wish to join. They go to Dr. A for examination, who does not charge Dr. B for his examination, but does charge Mrs. B. Is this in accordance with the Principles of Ethics? X.

ANSWER.—Sec. 2, Art. II of Chap. II of the Principles of Ethics says: "All practicing physicians and their immediate family dependents are entitled to the gratuitous services of any one or more of the physicians residing near them." This, however, refers to the services of one physician to another or to another's family in case of sickness; the case in point is more of a business transaction, and we see nothing unethical in Dr. A's charging for his services, if he so desires. Few physicians, however, would charge for the services mentioned.

Marriages.

OMAR BARTON PANCOAST, M.D., to Miss Joe Anna Ross, at Baltimore, October 1.

ROBERT SHERMAN KIRK, M.D., to Miss Alma Louise Seldler, both of Baltimore, October 1.

JOHN L. KIRKPATRICK, M.D., to Miss Maude Smith, both of Los Angeles, Cal., September 30.

HARRY ANDREWS COTTON, M.D., Boston, to Miss Alice Della Keys, at Baltimore, September 27.

FRED C. BLACKWELDER, M.D., Roswell, N. M., to Miss Mary Tutweiler of Indianapolis, October 7.

WINFIELD B. MARTIN, M.D., Freeport, Ill., to Miss Iona MacDonald of Chicago, September 30.

EDWARD J. FLEETWOOD, M.D., Wakefield, Neb., to Miss Inez E. Hultquist, at Osceola, Neb., September 16.

THOMAS B. CURRAN, M.D., Tacoma, Wash., to Miss Elizabeth Griggs Butler of Detroit, Mich., September 24.

JAMES LAWTON HIERS, M.D., Savannah, Ga., to Miss Elizabeth Meredith Maxwell of Omaha, Neb., October 7.

J. HAMILTON CHARTERS, M.D., Gaylord, Mich., to Miss Ethel Louise Chisholm of West Bay City, Mich., September 22.

H. HAYWARD STREET, M.D., Baltimore, to Miss Olivia S. Baldwin of Long Green Valley, Baltimore County, Md., October 1.

W. A. HEMINGWAY, M.D., a medical missionary of Shansi, China, formerly of Oak Park, Ill., to Miss Mary Williams, at Oxford, Ohio, October 1.

Deaths.

Joshua G. Allen, M.D. University of Pennsylvania, Philadelphia, 1856, died at his home in Philadelphia, September 26, from heart disease, aged 73. In 1863 he became visiting physician to the Philadelphia Lying-in Charity and Nurses' Home, which position he filled for thirty years. He was a member of the Philadelphia County Medical Society, Medical Society of the State of Pennsylvania, and the Philadelphia Obstetrical Society.

John H. B. Amick, M.D. University of Pennsylvania, 1876, a member of the Philadelphia Common Council for five years; inspector of drugs in the custom house during Harrison's administration, and during the Spanish-American War major-surgeon of the Nineteenth Pennsylvania Infantry, U. S. V.,

died at the German Hospital, Philadelphia, September 26, after an illness of ten weeks, aged 52.

Philo D. Patterson, M.D. University of Michigan, Ann Arbor, 1869, some-time president of the Michigan State Medical Society; a member of the American Medical Association, and the oldest practitioner in Eaton County, Mich., died at his home in Charlotte, September 27, from cancer of the throat, after an illness of several months, aged 60.

William H. Thomas, M.D. Medical College of Indiana, Indianapolis, 1876, a member of the faculty of his alma mater for two years, and later one of the founders of and a professor in the Central College of Physicians and Surgeons, died at his home in Indianapolis, September 30, from congestion of the brain, aged 70.

John Green, M.D. Charity Hospital Medical College, Cleveland, Ohio, 1867, a pioneer physician of Council Bluffs, Iowa, died at his home in that place from prostatic disease after an illness of more than a year, September 25, aged 71. He was a member of the Council Bluffs Medical Society.

Basil B. Brashear, M.D. Cleveland Medical College, died from ptomain poisoning at Upper Marlboro, Prince George County, Md., October 2, aged 81. He was a member of the faculty of Cleveland Medical College and chief surgeon of the Thirteenth Army Corps during the Civil War.

George Haven, M.D. Harvard University Medical School, Boston, 1883, instructor in gynecology in that institution; member of the Massachusetts Medical Society, died at his home in Boston, September 27, after a short illness.

Leven Cottingham, M.D. University of Louisville, Kentucky, 1882, member of the Henderson County (Ky.) Board of Health, died at his home in Robards, Ky., September 30, from dysentery, after an illness of ten days, aged 56.

Thomas P. Shepherd, M.D. Cleveland Homeopathic Medical College, 1899, of Cleveland, died at the Huron Street Hospital in that city, September 28, from toxemia following typhoid fever, aged 29.

Benjamin H. Milliken, M.D. New York University, 1863, died at his home in Bowling Green, Ky., after an illness of several weeks.

State Boards of Registration.

COMING EXAMINATIONS.

State Board of Medical Examiners of New Jersey, Trenton, Oct. 20-21.

Illinois State Board of Health, Great Northern Hotel, Chicago, Oct. 21.

Iowa State Board of Medical Examiners, Capitol Bldg., Des Moines, Oct. 21-22.

Louisiana State Board of Medical Examiners, Tulane Medical College Bldg., New Orleans, Oct. 26-27.

Oklahoma Medical Examining Board, Enid, Nov. 10.

Committee of the Connecticut Medical Society, City Hall, New Haven, Nov. 10.

Board of Registration in Medicine of Massachusetts, State House, Boston, Nov. 10-11.

State Board of Health of West Virginia, Point Pleasant, Nov. 10, 11, 12.

Nebraska State Board of Health, Lincoln, Nov. 11.

Medical Organization.

Indiana.

ELKHART COUNTY MEDICAL SOCIETY.—At the first fall meeting held in Elkhart, September 24, this society adopted the constitution and by-laws which had been so revised as to accord with those of the state and national organizations.

Iowa.

WOODBURY COUNTY MEDICAL SOCIETY.—This was organized, September 25, supplanting the smaller Sioux City Medical Society. There are forty physicians in Sioux City and twenty in the county outside of Sioux City and it is hoped to bring all these into the new society. The constitution and by-laws prepared by the American Medical Association were adopted, and the following officers elected, who will hold office until the regular election at the annual meeting on January 1: Dr. Guy C. Rich, Sioux City, president; Dr. Charles Rice, Smithland, vice-president; Dr. Francis J. Murphy, Sioux City, secretary; Dr. Frederick A. Powell, Sioux City, treasurer, and Drs. Van Buren Knott, Milton Daily and John R. Savage, all of Sioux City, censors.

Kansas.

KANSAS STATE MEDICAL SOCIETY, SECOND DISTRICT BRANCH.—The Southeast Kansas Medical Society, at a meeting in Parsons, formally disbanded, and its members then organized as the Second District Branch of the Kansas Medical Society, which embraces Lyon, Coffey, Anderson, Linn, Greenwood, Woodson Allen, Bourbon, Elk, Wilson, Neosho, Crawford, Chautauqua, Montgomery. Labette, Franklin and Miami counties. The first meeting of the new society will be held in Fort Scott, December 1. By this change the members of the society are made members of the Kansas State Medical Society, which is auxiliary to the American Medical Association. The officers of the new society are: President, Dr. Millard F. Jarrett, Fort Scott; vice-president, Dr. John B. Anderson, Chetopa, and secretary, Dr. George S. Liggett, Oswego.

Louisiana.

FRANKLIN PARISH MEDICAL ASSOCIATION.—Franklin Parish pnysicians met at Winnsboro, September 24, and organized, with Dr. W. W. Lee, president; Dr. Lewis M. Griffin, Wisner, vice-president, and Dr. Charles L. Ramage, Winnsboro, secretary and treasurer.

Minnesota.

SIBLEY COUNTY MEDICAL SOCIETY.—This was organized at Arlington, August 25, with the following officers: Dr. David N. Jones, Gaylord, president; Dr. Milo E. Bushey, Arlington, vice-president; Dr. Robert R. Stoner, Winthrop, secretary; Dr. Ward Z. Flower, Gibbon, treasurer, and Drs. W. H. Lord, Henderson, Christ W. Kanee, Arlington, and John J. Langford, Green Isle, censors.

North Carolina.

RUTHERFORD COUNTY MEDICAL SOCIETY.—Dr. E. C. Register, Charlotte, N. C., met the physicians of Rutherford County at Rutherfordton and organized a county medical society with the following officers: Dr. Theodore B. Twitty, Rutherfordton, president; Dr. Romeo Hicks, Henrietta, vice-president; Dr. Edgar B. Harris, Rutherfordton, secretary and treasurer, and Drs. J. B. Thompson, Cliffdale, T. G. Hamrick, Caroleen, and Charles B. Wiseman, Henrietta, censors.

Texas.

TAYLOR COUNTY MEDICAL SOCIETY.—Physicians of the county met at Abilene recently and organized a county medical society with Dr. Bass of the State Epileptic Colony, president; Dr. Luther A. Grizzard, Abilene, vice-president, and Dr. J. B. Thomas, secretary.

BASTROP COUNTY MEDICAL SOCIETY.—This society was organized at Bastrop, September 24. The following officers were elected: Dr. H. Powell, Luckett, Bastrop, president; Dr. John H. E. Powell, Smithville, vice-president; Dr. Henry B. Combs, Bastrop, secretary and treasurer, and Drs. John H. E. Powell, Smithville, Nosco B. Harris, Redrock, and W. R. P. Thompson, Smithville, censors.

TYLER COUNTY MEDICAL ASSOCIATION.—Dr B. F. Calhoun, Beaumont, councilor for the Tenth (southeast) District, met with the physicians of the county at Woodville, and organized a county medical society with initial membership of twelve. Dr. William V. Stewart, Colmesneil, was elected president; Dr. John B. Roberts, Woodville, vice-president; Dr. Dru McMicken, Woodville, secretary and treasurer, and Dr. William P. Chapman, delegate to the state association.

Wisconsin.

SAUK COUNTY MEDICAL SOCIETY.—The physicians of the county met at Baraboo, September 24, and organized. The following officers were elected: Dr. Charles Gorst, Baraboo, president; Dr. James D. Trumbauer, Loganville, vice-president; Dr. George L. G. Cramer, Baraboo, secretary and treasurer, and Drs. Marshall T. Martin, Merrimack, Frank D. Hulbert, Reedsburg, and John Buehler, Prairie du Sac, censors.

IOWA COUNTY MEDICAL ASSOCIATION.—This society was organized at Mineral Point, September 23, with the following officers: Dr. William J. Pearce, Dodgeville, president; Dr. F. M. Bailey, Mineral Point, vice-president; Dr. Simon P. Deahofe, Mineral Point, secretary and treasurer; Dr. Thomas S. Lawler, Cobb, delegate to the state society, and Drs. William J. Pearce, Dodgeville, F. M. Bailey, Mineral Point, and Hugh F. McDonald, Hollandale, censors.

CHIPPEWA COUNTY MEDICAL SOCIETY.—Dr. E. L. Boothby, Hammond, councilor for the Eleventh District, met the physicians of the county at Chippewa Falls, September 29, and or-

ganized a county medical society, with an initial membership of 14. The following officers were elected: Dr. Charles A. Hayes, Chippewa Falls, president; Dr. Robert Cottington, Bloomer, vice-president; Dr. Robert B. Cunningham, Cadott, secretary and treasurer, and Drs. Hugh McCormick, Auburn, Herbert H. Hurd, Chippewa Falls, and Eugene P. Ellenson, Chippewa Falls, censors.

Society Proceedings.

COMING MEETINGS.

New York State Medical Association, New York City, Oct. 19-22.
Congress of State and Provincial Boards of Health of North America, Baltimore, Oct. 23-24.
American Public Health Association, Washington, D. C., Oct. 26-30.
Hawaiian Territorial Medical Society, Honolulu, Nov. 7.
Oklahoma Territory Medical Association, Oklahoma City, Nov. 11.

AMERICAN ELECTROTHERAPEUTIC ASSOCIATION.

Thirteenth Annual Meeting, held in Atlantic City, N. J., Sept. 22 to 24, 1903.

Under the presidency of Daniel R. Brower, M.D., Chicago, this association met in the Hotel Windsor, Atlantic City, its sessions being unusually well attended.

President's Address.

Dr. Brower, in his address, referred feelingly to the death of Dr. Robert Newman, a very prominent member and an officer, and the association passed resolutions testifying to the esteem in which he was held and the loss sustained in his death. Dr. Brower congratulated the association on the active interest being taken in electrotherapy, but he called attention to the ignorance of many practitioners concerning this agency, and urged that, in view of the wide use which it will soon receive, knowledge of the principles of the methods should be widely disseminated. Fundamental facts that have been established by expert experimentation should be known to all to prevent errors and useless research. Dr. Brower suggested that the terms "faradism," "galvanism" and "franklinism" should give way to scientific nomenclature.

Election of Officers.

The following officers were elected: President, Dr. A. D. Rockwell, New York; vice-presidents, Drs. Willis P. Spring, Minneapolis, and W. W. Eaton, Danvers, Mass.; treasurer, Dr. Richard J. Nunn, Savannah, Ga.; secretary, Dr. Clarence E. Skinner, New Haven, Conn. The next meeting will be held in St. Louis, Sept 13 to 16, 1904.

Dr. Francis B. Bishop said that he thought he had proved that the high frequency current could be made to penetrate glass and transmit metallic and liquid substances. He described his experiments and in the discussion the reliability of his deductions was questioned by several.

Dr. William J. Herdman, Ann Arbor, Mich., made a report for the committee on constant current generators and controllers.

Dr. Alfred W. Baylis, Buffalo, spoke of the need for special preparation for electrotherapy as a field of work, and compared the work done here and in the hospitals abroad.

The Effects of the Secondary Static Currents in Removing Albumin and Casts from the Urine.

Dr. Boardman Reed, Philadelphia, read this paper, stating that it was common to find hyaline casts and albumin in the urine of patients who had been ill for some time with gastro-intestinal disorders, yet this form of renal affection was so amenable to treatment that he looked on it as an autotoxic nephritis dependent on indigestion. Following the lead of Dr. A. D. Rockwell he had subjected 18 such cases during the past year to electrical treatment, for the most part with the static wave current. Urinary analyses made before and after treatment demonstrated that such treatment exerted a distinct physical influence. Of the four cases reported in the paper, the albuminuria had been successfully controlled by static electricity.

DISCUSSION.

Dr. A. D. Rockwell cautioned against too much optimism with regard to this mode of treatment, stating that it was only occasionally that one met the mild forms that were suitable for such treatment. He believed that electricity acted beneficially by reducing congestion and increasing the blood pressure in the glomeruli.

Dr. William Benham Snow remarked that the wave current would act just as beneficially in these cases as the static induced if one took the precaution to use a sufficiently great spark gap, say four to six inches.

Dr. G. Betton Massey detailed an interesting case of glycosuria which he had controlled, so far as the glycosuria was concerned, by the use of static electricity.

Dr. A. D. Rockwell, New York, gave a paper presenting some theories concerning the action of electricity on the neurons.

X-Ray and Light in the Treatment of Tuberculosis.

Dr. Russell Herbert Boggs, Pittsburg, in this paper was of the opinion that these therapeutic methods were entitled to first place as adjuvants in the treatment of tuberculosis wherever located. He preferred to use a medium low tube with a coil, giving exposures of ten minutes on alternate days. With the static machine the treatment was more difficult and the dosage more uncertain. The tubes showed great individual variations, but the fluoroscope seemed to him to be the best test of the quality of tubes.

DISCUSSION.

Dr. Charles R. Dickson, Toronto, thought he had obtained fairly good results with the static machine.

Dr. William B. Snow said that if the static machine were operated so as to secure a sufficient volume of *x*-rays the results would be just as good as with the coil. He had proved the utter fallaciousness of the fluoroscopic test, and was, therefore, surprised to hear the author state that this was a better index of the quality of an *x*-ray tube than the spark gap.

Dr. Robert Reyburn, Washington, D. C., advanced the theory that the beneficial action of the *x*-ray in tuberculosis and cancer was due to the formation of an inflammatory product around the morbid cells, thus preventing further infection.

Dr. T. A. Pease reported a case in which he had successfully treated tuberculous glands of the neck by means of static electricity.

Dr. Francis B. Bishop agreed with the reader of the paper that, as a rule, better results were obtained with the coil, for, in order to secure good results with the static machine it must be run at very high speed in connection with a high vacuum tube. One could not get the same volume of current through the tubes with the static machine as with the coil. The speaker then reported three cases of tuberculosis which had apparently been cured by means of a convective discharge from "a cage" directed on the shoulders and chest. He could not accept Dr. Reyburn's theory, because it was known that if too long exposures were made at first there was great danger of causing general infection.

Dr. George Z. Goodell, Salem, Mass, said that after three months' treatment of a case of tuberculous adenitis of the neck with a current from the Kinraide coil and a spark gap of three inches, he was unable to observe any improvement.

Electricity in the Treatment of Chronic Deafness.

Dr. George Z. Goodell, Salem, Mass., presented his experience and those of others who had replied to his circular letter. Several had reported that a mild interrupted current relieved the tinnitus, but better results seemed to be obtained by the use of the continuous current with the positive pole to the ear. The exact value of electrolysis of the eustachian tube was not yet determined.

Employment of Static Electricity in the Treatment of Nervous Diseases.

Dr. William Benham Snow, New York, said that there were few nervous diseases that were not associated with inflammatory processes and failure of nutrition. Such conditions

were best met, in his opinion, by the use of the wave current. In acute neuritis he employed as long sparks as possible along the affected nerve, and in chronic neuritis the sparks were applied over the area in which they caused the most pain. Excellent results could be obtained in the very early stages of anterior poliomyelitis from electrical treatment.

DISCUSSION.

DR. R. J. NUNN, Savannah, Ga., spoke of the therapeutic possibilities of radium, and expressed the belief that all electrical currents presented vibrations, and that the lower vibrations simply served as diluents of the higher ones.

DR. CHARLES O. FILES, Portland, Me., was of the opinion that the curative action of electricity was dependent on its ability to relieve all forms of congestion.

A Year's Work in Electrotherapy.

DR. LAURA V. GUSTIN-MACKIE, Attleboro, Mass., read this paper, which embodied a clinical experience of 125 cases. She spoke of the great relief that she had observed from the use of electricity in anemic women suffering from ovarian pain and various pelvic disturbances.

Electrical Treatment of Trachoma and Corneal Opacity.

DR. MARGARET A. CLEAVES, New York, presented in this paper the history of a severe and neglected case of trachoma that she had successfully treated by zinc electrolysis. During a period of 3½ months she gave 37 electrical applications, using a current of 2½ milliamperes for two minutes at each sitting, and an indifferent of 11 square inches at the nape of the neck. Improvement was noted within ten days. The boy had been discharged cured in June, 1896, and in October of the same year treatment of the corneal opacity was begun, using cathodal electrolysis and one milliampere of current for from one to three minutes three times a week. The boy now has a good position in the business world, whereas but for the treatment he would have become a public charge.

The Successful Treatment of Eighteen Cases of Granular Lids by the X-Ray and High Frequency Vacuum Electrodes.

DR. ALBERT C. GEYSER, New York, had made exposures of four or five minutes every other day for two or three weeks, and had then used the high frequency current to improve nutrition.

Exophthalmic Goiter and Its Rational Treatment.

DR. FRANCIS B. BISHOP, Washington, D. C., presented this paper on Wednesday morning. He believed that the early and continued use of the corset was a prominent factor in the etiology of this disease, and that, as a part of the treatment, it was highly important to remove all pressure from the abdomen and secure deep breathing. It was also essential that these persons should have an abundance of rest and of nitrogenous food. Medication had proved a delusion and a snare, but much benefit resulted from electrical treatment. He made use of the continuous current, gradually increased up to the point of toleration, and regulated in accordance with its effect on the pulse. A large sponge electrode should be connected with the positive pole and placed high up on the neck, and two sponge electrodes, connected with the negative pole, should be placed on either side of the neck over the pneumogastric nerves and the thyroid. After such an application for ten or fifteen minutes the patient would be quieted, and the current should then be applied directly to the gland for the same length of time, the sittings being on alternate days.

DR. T. A. PEASE, Norwood, N. Y., claimed much for his method, which consisted in blanching the skin by the cataphoric use of a 4 per cent. solution of adrenalin, and then applying the high frequency current with a wooden electrode.

DR. A. D. ROCKWELL, speaking from a long and large experience with this affection, advised the use of the galvanic current in considerable strength, applying it by means of large clay electrodes over the ciliospinal center and the solar plexus.

DR. WILLIAM W. EATON, Danvers, Mass., had had a favorable experience by practically the same method as outlined by Dr. Rockwell.

DR. WILLIS P. SPRING, Minneapolis, asked for experience as to the effect of using the fluoroscope on the operator's eyesight.

DRS. W. J. HERDMAN and C. R. DICKSON said that it caused marked deterioration of the vision.

DR. LORING, Boston, said that a simple and efficient means of protecting the eyes was by attaching a thick piece of glass behind the fluoroscopic screen.

DR. R. J. NUNN suggested that this glass shield should be selected only after testing its opacity to the *x*-ray.

Zinc-Mercuric Cataphoresis of Tuberculous Glands.

DR. G. BETTON MASSEY, Philadelphia, described his method, and exhibited two patients that had been so treated. He employs for the active electrode a sharpened sliver of amalgamated zinc, which, except for the first treatment, is insulated nearly to the tip. The first puncture is made with a Hagedorn needle. A current of one to three milliamperes is allowed to flow for half an hour, and the treatment is repeated three times a week. It was worthy of note that not only is the local process cured but the patient's general condition is decidedly improved.

A Plea for Electrotherapeutics Proper.

DR. WILLIAM J. HERDMAN, Ann Arbor, Mich., urged the association to resist the temptation to run after fads and indulge in borderline studies. He rehearsed the manifold therapeutic properties of the various currents.

Radiant Light Baths in the Treatment of Neuroses.

DR. THOMAS D. CROTHERS, Hartford, in this paper, was even more enthusiastic than in his paper of one year ago. Increasing experience showed that not only was the radiant light bath more acceptable to the patient, but observations on the pulse, temperature and influence on the secretions proved the superiority of the light bath.

DR. CHARLES H. SHEPARD, Brooklyn, advocated the use of electricity in conjunction with the hot-air bath.

DR. W. J. HERDMAN warmly seconded this suggestion, arguing that the stimulant effect of the induced current was an admirable corrective of the debility necessarily produced by the hot-air bath.

Radium, with a Preliminary Note as to Its Therapeutic Uses in Cancer.

DR. MARGARET A. CLEAVES, New York, said that there were three distinct types of rays emanating from radium, viz.: the *a*-rays, representing the major portion, and presenting some of the characteristics of the *x*-ray; the *b*-rays, which are much longer and correspond to the cathode rays, and the *r*-rays, which have a still higher rate of vibration. As one of the pioneers in the therapeutic use of radium, Dr. Cleaves reported two cases that she had treated with the aid of one gram of radium of 7,000 radioactivity, i. e., having 7,000 times the radioactivity of uranium.

The Present Status of X-Ray Therapy in the Management of Cancer.

DR. CLARENCE E. SKINNER, New Haven, Conn., read this paper, saying that the *x*-ray was one of the best means for the treatment of malignant disease, because as large a proportion of cures and as small a proportion of recurrences during a given period had been obtained with it as with any other means. It was now generally believed that in the early stages malignant disease should be removed by the knife, and that this should be followed by a thorough course of *x*-ray treatment. Whether or not, as some seem to think, the *x*-ray actually hastened metastasis could not be stated positively, but the evidence seemed to be against such a view.

Report of Committee on Current Classification and Nomenclature.

MR. WILLIAM J. JENKS, E.E., presented this report on Thursday, urging the substitution, so far as possible, of the terms "constant current" for "galvanic current," and "induced" or "magnetic induced current" for "faradic current."

Perineuritis.

DR. A. W. BAER, Chicago, pointed out the fact that an electrical application constituted a good means of differentiating

between facial neuralgia and suppuration at the root of a tooth.

Other papers read were: "Clinical Report on the Use of the X-Ray in Lesions of the Spinal Cord," by Dr. C. W. Daniels, Savannah, Ga.; "Currents of High Frequency, Apparatus and Therapeutic Uses," by Dr. F. G. DuBose, Selma, Ala.; "The Roentgen Ray as an Aid in Diagnosis," by Dr. Herman Grad, New York; "A Plea for an Accurate and Scientific Method of Roentgen Ray Treatment," by Dr. M. K. Kassabian, Philadelphia.

Cases were also reported: Eight of advanced cancer, by Dr. W. W. Eaton, Danvers, Mass.; one of asthma with fibroids and pelvic adhesions, by Dr. C. A. Covell, Syracuse; several of malignant growths, by Dr. M. M. Johnson, Hartford, Conn.

AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS.

Sixteenth Annual Meeting, held in Chicago, Sept. 22-24, 1903.

(*Concluded from page 925.*)

Shortening of the Round Ligaments by the Blunt Hook Method.

DR. H. W. LONGYEAR, Detroit, described this method as follows: "The location of the internal ring is determined by finding the point of crossing of Poupart's ligament and femoral artery, as the ring is situated immediately back and above it. Beginning half an inch inside this point and cutting toward the pubic end parallel to Poupart's ligament, a one-inch incision is made through skin, fat and superficial fascia. Eye retractors and blunt hooks are then used, the tissues separated down to the aponeurosis of the external oblique, which is thus laid bare to the eye, to the extent of about one square inch. A puncture is now made through this aponeurosis one-quarter of an inch long, situated just above Poupart's ligament and to the back of the square inch of cleared aponeurosis, and through this the blunt hook is inserted and the ligament drawn out, usually with more or less of the fat of the canal along with it. The ligament is isolated and its fibrous attachments stripped back toward the internal ring with blunt-pointed dressing forceps, the ligament drawn out to the necessary length, an aneurism needle passed through the aponeurosis and the loop of ligament drawn through this, folded back on itself, and, with one stitch of kangaroo tendon, made fast, the suture embracing in its grasp the edges of the aponeurosis where the ligament first passes through it, half of the ligament at the same point and half on each side of the loop that is folded back on it. The skin is then closed by a running catgut suture, and dressings applied. The operation is applicable only to cases of mobile uteri without diseased appendages, in which cases it is an ideal procedure, or to cases in which adhesions may have been previously broken up by abdominal section."

Of 58 cases operated on by this method, late examination has shown the uterus to be in normal position in 48; 6 other cases were normal two to five months after operation, and were then lost sight of; there was 1 partial failure and 2 complete failures.

DISCUSSION.

DR. EDWARD J. ILL had done this operation twelve times and, while the uteri remained in place, the painful scars made trouble.

DR. ALBERT GOLDSPOHN, Chicago, said the objections to the simple Alexander operation were that it was not thorough and it did not fulfill all the indications. He then mentioned his own method.

The Need for Study of the Symptoms of Perforation in Typhoid Fever, and the Life-Saving Possibilities of Early Operation.

DR. W. D. HAGGARD, Nashville, Tenn., stated that only about three hundred cases of operation for intestinal perforation in typhoid fever had been reported since the first case in 1884. Granting that this represented only one-half or one-fourth, the number is pitifully meager when it is computed that twenty-five thousand persons die yearly in the United States from perforation and peritonitis in typhoid fever.

He made a plea for an early diagnosis and an attempt to save a part of this appalling number. On a basis of a possible 30 per cent. recovery, which was shown to have been attained in the reported cases, 7,500 lives might be preserved yearly by prompt operation. The difficulty lies in making an early diagnosis. The abdomens of typhoid cases should be exposed and carefully examined daily. No abdominal symptom or sign should be considered trivial. Pain was usually the first note of alarm—sudden, severe, colicky and persistent. Exploratory laparotomy, under cocain if necessary, was earnestly urged as a diagnostic measure in suspicious but doubtful cases. A plea was made for recognition and interference with the early and mild symptoms. The surgeon should stand in close relationship with the physician in all typhoid cases, as is done in appendicitis.

Dr. Haggard reported three successful operations and described the technic.

DISCUSSION.

DR. JOHN B. MURPHY had operated on two cases of peritonitis with typhoid fever without perforation. Both recovered.

DR. ROBERT T. MORRIS said the general practitioner must feel impelled to call a surgeon to his aid in almost any case of typhoid, not necessarily for operation, but for consultation. In a case of simple peritonitis from extension of the infection, the patient should be relieved by opening the abdomen and draining. Hemorrhage in typhoid fever cases is dangerous and has not received the attention it deserves. He predicted that in the next decade hemorrhage in typhoid cases would be treated surgically.

DR. WILLIS G. MCDONALD said that the classical description presented in text-books of intestinal perforation in typhoid fever was misleading. It was rather a fine description of impending death.

DR. LEWIS S. MCMURTRY, Louisville, Ky., delivered the "Memorial Address on Dr. William E. B. Davis of Birmingham, Ala.," paying a high tribute to an earnest, honest, able and intense man, who, dying before the age of forty years, had done the work usually encompassed in a good long life.

Some of the Sources of the Disappointments of the Surgeon.

This was the title of the president's address, delivered by Dr. L. H. Dunning, Indianapolis. He urged the importance of not making an unwarrantedly favorable prognosis. New methods need the test of time ere there is too much dependence placed on them. The most nearly perfect surgeon is one who orders his life with the utmost care, but disappointments in greater or less degree will come to all surgeons, be they ever so successful, for it seems to be the natural order of things that contrasting or antagonistic elements shall exist side by side. The man who becomes despondent and inactive because of this is the weak man. The strong man will endeavor to magnify the good and crush out the evil. The surgeon's hope should be to eliminate every preventable source of failure and, when failures do come, to make of them task masters compelling the way to better things.

The Rational Treatment of Postpartum Infections of the Uterus.

DR. D. TOD GILLIAM, Columbus, Ohio, after discussing the bacteria concerned, called attention to the fact that a recently delivered uterus is an excellent culture ground for infection, being filled with the juices of disintegration and spilled blood. The mortality would be appalling were it not for the safeguards. These are: 1. Autosterilization of the genital tract. 2. The protective epithelium. 3. The protective leucocytes under the epithelium. The germ of Döderlein is the principal agent in sterilizing the genital tract; hence irrigation before or after labor is harmful, because it washes this germ away and does not entirely rid the tract of pathogenic germs. The normal death rate of puerperal infection is about 1 per cent., but after curettage it amounts to 20 per cent. The sharp curette is especially dangerous, as it not only fails to remove the germs, but destroys the protective barriers. As it is impossible to say that streptococcus infection is not present in any case, the only safe way is to eschew the sharp curette entirely in puerperal infection. Curettage is only permissible where there is known to be

fetal debris in the uterine cavity, and where there is reason to believe no streptococci are present. For this the finger or dull curette with stiff handle should be used. Flushing, if done at all, should be done with every precaution against infection. The patient should be on a table, under a good light, the vulva and vagina cleansed, the latter with 5 per cent. creolin in liquid green soap, mopped, dried and retractor introduced; the cervix grasped, drawn down and steadied with forceps; the cervical canal wiped out with gauze and bits of membrane picked off with forceps. Gently introduce irrigator and flush. If pulse and temperature drop, repeat daily or oftener, otherwise discontinue.

"Penetrating and Perforating Gunshot and Stab Wounds of the Abdomen" was the title of a paper by Dr. John Young Brown, St. Louis, which went fully into the literature and reported cases.

The Use of the Stem Pessary for Infantile Uteri, Scanty Menstruation, Amenorrhea and Dysmenorrhea.

DR. J. HENRY CARSTENS, Detroit, explained the theory that since weak or poorly developed muscles can only be strengthened by constant exercise, the only way to exercise the uterine muscles is to introduce something into the uterus, and the constant tendency to expel the contents will enlarge the muscles and develop the uterus. It is absolutely essential that no pelvic trouble, either chronic or latent, exists and the diagnosis must be perfect. He uses the Chapman hard rubber pessary and leaves it in from six months to two years. He cited cases showing relief secured by this method.

"Tuberculosis of the Female Genitalia and Peritoneum" was the title of a paper by Dr. John B. Murphy, Chicago, which considered in detail all the varieties.

Movable Kidney with Secondary Cyst Formation, Resembling Ovarian Cyst.

DR. RUFUS B. HALL, Cincinnati, argued against the almost universal practice not to interfere until compelled to do so. He contends that if the cases of movable kidney are operated on early for fixation of that organ, it will save structural changes and give great relief from invalidism. Movable kidneys, if neglected, may undergo cyst formation or develop hydronephrosis or pyonephrosis, as in the cases reported.

DR. N. STONE SCOTT, Cleveland, Ohio, read a paper on "Surgery of the Ileocecal Valve for Malignant Disease," and reported cases.

The Choice of Methods for Closing the Parietal Abdominal Incision.

DR. EDWIN RICKETTS, Cincinnati, thought that the through-and-through sutures of silkworm gut with the midway closure of the peritoneum with interrupted sutures of fine silk is nearer to the ideal method than any other. Silkworm gut is actually impervious to any attacks of infection.

Supravaginal Amputation for Fibroid Tumors.

DR. HERMAN E. HAYD, Buffalo, N. Y., wished to place himself on record as believing that the supravaginal amputation for necessarily operable fibroids meets nearly every indication and has been applied to every conceivable kind of tumor, with short or long pedicle, tumors growing deep into the pelvis or out into the broad ligaments, and with results which make it a clean and ideal piece of surgery. It is the operation of choice, excepting in those cases where drainage must be provided for or where the cervix, for various other reasons, should be removed.

The Pelvic Musculature in Disease.

DR. HUGO O. PANTZER, Indianapolis, read this paper, narrating two extreme cases in detail. In one, during a subperitoneal hemorrhage involving both broad ligaments, the muscles of the pelvic floor were in spastic, painful contraction. This symptom has been found available in differential diagnosis between pelvic hematoma and hematocele. In the second case similar contraction was observed in a case of gangrenous appendicitis.

Veratrum Viride in Surgical and Obstetrical Practice.

DR. CHARLES L. BONIFIELD, Cincinnati, in this paper said that veratrum stimulates the liver, kidneys, skin and salivary glands, lowers temperature and relieves inflammatory pain by its effect on the circulation. These properties make it valuable in localized peritonitis and in salpingitis. In appendicitis the appendix should, if possible, be removed during the first twenty-four hours. When this can not be done the Ochsner treatment should be given, supplemented by the hypodermic administration of veratrum. In the treatment of postoperative peritonitis, after the very important free purgation has been secured, the heart, by its exceedingly rapid action, may exhaust itself before convalescence can be established. In this condition there is no drug equal to veratrum. It is superior to strychnin or digitalis because, while they may stimulate the heart to act for a time with renewed vigor, veratrum makes the work of the heart easier and gives it a chance to rest between beats.

Veratrum has been used for thirty years in the treatment of eclampsia by a considerable number of practitioners without a fatality, and every one who has given it a thorough trial acknowledges it to be superior to chloroform, morphin or any other drug in general use.

Ovarian Grafting.

DR. ROBERT T. MORRIS, New York, detailed some progress in experimental work and then took up the use of the procedure in human subjects. At the present time he had reached this point: (1) If the ovaries and oviducts have to be removed *en masse*, the patient will suffer from a precipitate menopause if she is left without an ovary. If a piece of ovary be taken from this patient or from another operated on at the same time, put in a salt solution at a temperature of 100 F., and then grafted in the broad ligament, that patient will continue to menstruate and to have the comfort that goes with the possession of an ovary. But if an ovary be grafted from another patient, at the end of a year perhaps the grafted ovary will have practically disappeared and her menopause begin. If a woman be grafted with a piece of her own ovary, the menopause may not begin for some years afterward, or until the normal time for it. This is a practical point, he said, which surgeons can apply in their everyday work. (2) A patient grafted with a piece of her own ovary may become pregnant if a tube and oviduct on one side be left, or part of it on one side. A patient grafted with a piece of an ovary from another patient may become pregnant, if pregnancy occurs quickly. (This has occurred twice with rabbits during his experimentation.) But pregnancy must occur before degeneration has gone to such a point that the ova are not well formed. He expected to obtain further good results.

DISCUSSION.

DR. D. T. GILLIAM, Columbus, Ohio, inquired what kind of suture was used.

DR. MORRIS replied that he uses the very smallest No. 1 catgut.

DR. JOHN B. MURPHY asked how Dr. Morris places the ovary in the abdomen. He said he had removed one ovary in connection with a fibroid tumor and transplanted it into a monkey. He split the ovary, transplanted half of it subperitoneally and the remaining half intraperitoneally. He removed it thirty-two days afterward, and sent it to the pathologist, without any statement as to what was done, and asked for an opinion as to the condition of the ovary. The pathologist reported that the ovary was absolutely normal in every respect.

DR. HERMAN E. HAYD said that if the processes of ovulation and menstruation will go on whether an ovary be transplanted intraperitoneally or extraperitoneally, there will be infinitely less danger if the piece of ovary was transplanted into the abdominal wall. In other words, one need not worry about his technic if menstruation will go on just the same.

DR. MURPHY said the transplantation of an ovary intraperitoneally is fatal. The peritoneum will eat rapidly everything brought in contact with it.

DR. ALBERT GOLDSPOHN said that he had not utilized ovarian tissue that had been completely severed from its original connection, fearing that it might seriously interfere with function.

In one case he used only a slight vestige of an ovary. It looked like a mass of denuded raw connective tissue, although there was ovarian tissue in it. The remnants were poorly connected with a little bit of connective tissue. In another instance there was more connective tissue. He swung the fragment around to the nearest accessible healthy peritoneal surface and stitched it with fine catgut. Both women menstruated; one for two months and the other regularly ever since. The latter is enjoying very good health. There seems to have been no difference caused in the sexual appetite.

Dr. James F. Baldwin asked if the ovarian transplantation is to prevent the menopause, and not with the idea of future pregnancy, this being of minor importance, why may we not, in a patient who has been operated on several months before, make an incision down to the peritoneum, make the little pocket and drop in the healthy ovary from patient No. 2, and close the incision? Frequently an ovary may be embedded in the densest adhesions in the pelvis, the woman has gone on menstruating, but has not conceived. It seemed to him that an ovary is in the peritoneal cavity only for pregnancy.

Dr. Morris said that the corpus luteum controls menstruation. So long as a corpus luteum is formed in a grafted ovary the patient will menstruate. When a corpus luteum is not developed then the patient ceases to menstruate. This explains why menstruation is more temporary when an ovary is transplanted from another person; it degenerates after a time, being foreign to the organism into which it is transferred. Dr. Morris said it was necessary to get a lymph circulation in order to keep the ovary alive. Were it not for this lymph circulation the ovary would become absorbed, because the peritoneum will digest beefsteak. In a few days a complete ovarian circulation is established. He has seen pretty good sized arteries surrounding a grafted ovary, but not actually in it. A nurse who had had her ovaries removed two years previously, and who had ceased menstruating, menstruated regularly for several months after an ovarian grafting. A young woman with an infantile uterus, after receiving an ovarian graft, menstruated for a year. The graft then became absorbed and menstruation ceased. This is a new line of work, and while there may be some disappointments, practical points are being brought out that are going to be of great value.

Dr. F. F. Simpson, Pittsburg, Pa., read a paper entitled "A Consideration of Combined Ectopic and Intrauterine Pregnancy, with Report of a Case." He analyzed the case and said that the common errors in diagnosis have been (a) the recognition of the uterine pregnancy and mistaking the ectopic for an inflammatory condition or neoplasm; (b) the recognition of ectopic and overlooking the uterine pregnancy. Accompanying the paper is a table of 118 cases from literature.

Emergency Abdominal Surgery at the Patient's Home—A Demonstration.

Dr. Willis G. MacDonald, Albany, said that operation in the patient's home becomes a necessity in many conditions—as in intestinal perforation—and the surgeon must be prepared to treat such emergencies without delay and yet under aseptic conditions. He discussed the various details.

Ectopic Pregnancy.

Dr. Henry D. Ingraham, Buffalo, reported twelve cases operated on. After careful serial microscopic examination he was inclined to think that previous inflammation of the tube had but little to do in causing ectopic pregnancy. The only condition discovered that could be the cause was the case of constriction of the tube, the cause of which at present was unknown.

PENNSYLVANIA STATE MEDICAL SOCIETY.

Fifty-third Annual Meeting, held at York, Sept. 22 to 24, 1903.

(*Continued from page 926.*)

Streptococci and Antistreptococcus Sera.

Dr. D. H. Bergey, Philadelphia, read a paper in Section A on September 24, in which he stated that the recent studies with the antistreptococcus sera appear to demonstrate that such streptococci can not be regarded as the etiologic factors of such diseases as acute articular rheumatism, scarlet fever and smallpox, as had been claimed by different investigators.

Some Points on Appliances for Bacteriologic Work by Busy Country Doctors.

Dr. A. C. Wentz, Hanover, spoke extemporaneously, addressing some very valuable remarks to the country practitioner. He exhibited a number of valuable devices for the office which is not provided with a laboratory.

The Necessity for the More Careful Instruction of Medical Students in the Diagnosis of Preventable Diseases.

Dr. Benjamin Lee, Philadelphia, felt that the tendency with both student and instructor was to devote too much attention to therapeusis and not enough to diagnosis. The large increase in diphtheria he believed largely due to the failure of physicians to differentiate between this condition and follicular sore throat or tonsillitis. The same was remarked of scarlet fever. In smallpox lies the greatest importance of early diagnosis. Students should be compelled to study all these diseases.

DISCUSSION.

Dr. J. M. Anders agreed with the above statements and cited the fact that in Philadelphia, through the courtesy of Dr. Welch and of the Board of Health of Philadelphia, the students of the various medical colleges have abundant opportunity to observe this class of diseases in the Municipal Hospital.

Dr. Seneca Egbert emphasized the value of personal observation of these diseases. He stated that the Philadelphia students are required to release the city and the board of health from liability in case of infection, and are required to disinfect their persons before leaving the wards.

The Effect of an Improved Municipal Water Supply on the Prevalence of Enteric Diseases.

Dr. J. Frank Small, York, gave statistics and urged that efficient filtration of a municipal water supply has a decided effect in lessening the prevalence of enteric disease.

DISCUSSION.

Dr. Seneca Egbert believed that the demonstration given by Dr. Small should be repeated in every city in the state. He felt that the people do not appreciate the need of pure water.

Dr. D. H. Bergey felt that if the trouble were taken to make a detailed investigation, other sources of infection would be found in every case of typhoid fever, e. g., milk, etc.

Dr. J. V. Kelly, said that in 52 cases in the Twenty-first Ward, 27 were traced to one milkman.

A Contribution to the Clinical Study of Cerebrospinal Meningitis.

Drs. Thomas C. Ely and J. J. Snyder, Philadelphia, reported a series of 23 cases, sailors from the U. S. Training Ship *Minneapolis*. A notable feature was the vagueness of symptoms in some instances. Only in epidemics, they stated, would these cases have been classified, and the fact leads to the query whether sporadic cases are not often overlooked, just as doubtless cerebral pneumonias and cerebral typhoids are improperly classified as sporadic cases of cerebrospinal meningitis.

DISCUSSION.

Dr. A. O. J. Kelly, Philadelphia, called particular attention to the toxic nature of some of the symptoms. He hoped that in the future it would be possible to separate similar pathologic lesions of diverse etiology.

A case of "Aneurism of the Left Subclavian Artery Treated by Wiring and Electrolysis" was reported by Dr. Judson Daland, Philadelphia. Death occurred in 20 days. Dr. Daland believes that this operation is worthy of trial when medical treatment fails, and that the percentage of success will be greatly increased if the operation be not performed as a dernier resort.

Typhoid Fever.

Dr. L. B. Kline, Catawissa, called attention to the increasing ravages of typhoid fever. Comparison with other acute and infectious diseases shows a higher number of cases and a larger death rate for typhoid fever. He approves of the main-

tenance of the intestinal tract in an aseptic condition. Coal-tar products should be interdicted.

DISCUSSION.

DR. A. O. J. KELLY stated that when there were severe toxic effects with great exhaustion, diminution in the urine, etc., the greatest benefit was to be derived from hypodermoclysis. Those cases not so profoundly toxic are given the greatest benefit by enteroclysis. He emphasized the great value in toxic conditions of normal salt solution.

The Need of a Ward in the General Hospitals for the Treatment of the Mildly and Curably Insane.

DR. H. W. RHEIN, Philadelphia, in this paper said that many cases of mild and incipient insanity which can not be treated at home should, instead of having to go to an insane asylum, be treated in a special ward in the general hospital, under the care of an alienist, who should be a member of the staff of the hospital.

The Dietetic Treatment of Chronic Nephritis.

DR. J. M. ANDERS read this paper, stating that a dietary is inadequate if it fails to meet the requirements of nutrition plus the loss of albumin. Proper diet is vital. To lessen albuminuria at the expense of the quality of the blood and general nutrition is very unwise. He allows red meats and fats and butter (except in obesity). Whole milk should be a considerable portion of the diet. Meats should be somewhat restricted, while fruits and green vegetables and rice may be given rather freely. He emphasized the fact that the normal daily physiologic quantity of food is required, which is practically 110 to 130 grams of albumin, 350 to 400 grams carbohydrates, 75 to 110 grams of fat, 2,500 to 3,000 grams of water, and 18 to 30 grams of inorganic salts. The importance of carefully recording the bodily weight of the patient is also emphasized, and systematic blood examinations are urged.

DISCUSSION.

DR. THOMAS D. DAVIS, Pittsburg, said he had been successful in giving milk in a cup instead of a tumbler to patients, who feel that they can not take milk, and the addition of some vanilla and a bit of ice rendered the milk more agreeable.

DR. JOHN H. MUSSER reported a case of typhoid fever seen in relapse, not operated on because of the condition of the patient, who afterward recovered. This was discussed by Drs. W. J. Middleton, F. V. Swing and R. H. Gibbons.

Symposium on X-Ray Therapy.

At the Wednesday morning session of Section B Dr. George W. McNeil, third vice-president, presiding, a paper on "*X*-Ray, Light and High Frequency Electricity" was read by Dr. Russell H. Boggs, Pittsburg, in which he gave a detailed consideration of the whole subject.

"Utility of the *X*-Ray for the Treatment of Chronic and Malignant Diseases of the Skin and Superficial Tissues" was read by Dr. Samuel H. Heller, Lancaster, who believed that deleterious results are due to improper technic and detailed some of his own cases.

"Roentgen Rays as a Palliative in the Treatment of Cancer" was the title of a paper by Dr. C. L. Leonard, Philadelphia. He advocated this method postoperatively and in inoperable cases. He emphasized the value of perfect technic and credited many of the failures to improper application.

DR. MIHRAN K. KASSABIAN, Philadelphia, read "Roentgen Rays in Therapeutics," a thorough presentation of the subject. He recommended the preservation of careful statistics of all cases treated.

DISCUSSION.

These papers were discussed by Dr. Taylor, Philadelphia, who reported a case, and by Dr. Lewis H. Taylor, Wilkesbarre. Dr. Leonard said he had secured excellent results in the treatment of neuralgia and neuralgic headaches.

"Some Problems in Surgery" was read by Dr. George D. Nutt, Williamsport.

DR. WILLIAM H. BEACH, Pittsburg, read a paper on "Proctocolitis, with Special Reference to Treatment." He gave in detail the diet and medication advised, and felt that surgical relief should be resorted to only in extreme cases. In the discussion, Dr. John G. Clark, Philadelphia, recommended the method of Weir of draining the colon through the appendix.

(To be continued.)

COLORADO STATE MEDICAL SOCIETY.

Twenty-third Annual Session, held in Denver, Oct. 6 to 8, 1903.

The beneficial effect of the recent reorganization made itself manifest by a large attendance of members, both from the city of Denver and from the counties all over the state. From the point of numbers and enthusiasm it was the most successful meeting ever held in the state. The constitution was so amended that only members of county societies may hereafter become members of the state society. The section referring to membership of graduates from sectarian colleges was amended by inserting the following proviso: "and who is not affiliated with a sectarian college or society." Resolutions were passed to request President Roosevelt to appoint a physician on the Panama or Nicaraguan Canal Commission.

The most far-reaching action taken by the society was the resolution to establish a state medical journal. The editor was elected, Dr. Edward Jackson, who was at one time the editor of the *Pennsylvania State Medical Journal.*

The election of officers resulted as follows: President, Dr. Thomas H. Hawkins, Denver; vice-presidents, Drs. J. Tracy Melvin, Sagauche, A. C. Friedman, Colorado Springs, and R. F. Graham, Greeley; delegates, Drs. Sol. G. Kahn and W. A. Jayne; councilors, Drs. C. F. Gardiner, Colorado Springs, and S. D. Hopkins, Denver; secretary, Dr. J. M. Blaine, and treasurer, Dr. W. E. Rothwell; publishing committee, Drs. Edward Jackson, Robert Levy and S. E. Solly.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Twenty-ninth Annual Meeting, held at Memphis, Oct. 7 to 9, 1903.

The following officers were elected for the ensuing year: President, Dr. Hugh T. Patrick, Chicago; vice-presidents, Drs. Bransford Lewis, St. Louis, and George W. Cale, Springfield, Mo.; treasurer, Dr. Thomas Hunt Stucky, Louisville, Ky., re-elected: secretary, Dr. Henry E. Tuley, Louisville, Ky., re-elected. The time and place of meeting were left to the president, secretary and treasurer to decide. A report of the other proceedings will be given next week.

Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

Bromipin by the Bowel.

Rahn, in *Ther. d. Gegenwort,* recommends the use of bromipin, administered per rectum, to infants. He advises it in doses of one grain to an infant one month old, doubling the dose with each month so that a child six months old should receive one and a half drams (6.00) of the preparation. He administers it mixed with one or two ounces of flaxseed tea. He states, in the treatment of infantile convulsions, that positive results are obtained within a few minutes.

In pertussis he obtained good results by administering it night and morning, diminishing the frequency and severity of the attacks. Also convulsions due to tuberculous meningitis were controlled by this preparation given three or four times in the twenty-four hours. Good results have been obtained from the use of this preparation in rachitis and epilepsy.

Hönigschmied, in *Pediatrics,* recommends bromipin in all affections where bromin preparations are indicated. He uses it in the treatment of vertigo, cerebrospinal meningitis, nervous insomnia, recent cases of chorea, in nightmare, melancholia and neuralgia. In cerebrospinal meningitis, he empties the bowel

and gives an enema of 1 to 4 drams (4.-15), according to the age. The bromipin is given alone slightly warmed. He cites several cases where bromipin was used successfully.

Laryngeal Tuberculosis.

Castex, in *Amer. Med.*, recommends in the treatment of laryngeal tuberculosis that hot flannel binders be applied to the neck and renewed frequently during the first stage of the disease. The laryngeal mucous membrane may be sprayed with one of the following solutions:

℞. Sodii benzoatis ..... gr. xlv 3
Aquæ destil. ..... ʒiii 90
M. Sig.: As a spray; or:

℞. Acidi carbol. ..... gr. xv 1
Glycerini
Aq. destil., āā ..... ʒii 60
M. Sig.: As a spray; or:

℞. Menthol ..... gr. xv 1
Gomenol 3iiss 10
Alcoholis ..... ʒii 60
Aq. destil. ..... ʒv 150
M. Sig.: Apply locally as a spray.

[Gomenol is a terpinol preparation.]

He recommends that the treatment of the larynx be repeated two or three times a day. In the third stage the following is recommended:

℞. Cocainæ hydrochlor. ..... gr. xxx 2
Morphinæ hydrochlor. ..... gr. xv 1
Antipyrini 3iiss 10
Glycerini (neutral) ..... ʒii 60
M. Sig.: One teaspoonful added to half a glass of distilled water and used as a gargle.

Solis-Cohen recommends the following combination:

℞. Orthoform
Anesthesin, āā 3i 4
Ext. suprenalis
Iodoformi, āā 3ii 8
M. To be insufflated into the larynx, especially when painful ulcerations are present.

And topically he advises the following:

℞. Guaiacol 3iiss 10
Menthol 3i 4
Olei olivæ 3vi 25
M. Sig.: Apply locally after an application of cocain.

Vomiting in Tuberculosis.

Pegurier of Nice, in *Bul. gen. de Ther.*, states, in the treatment of vomiting of phthisis, that the excitability of the gastric mucosa must be calmed. Small pieces of ice after meals are of benefit, together with the administration of anesthetic substances such as aqua chloroformi, menthol, hydrogen peroxid, and iced champagne. The following may be given:

℞. Aq. chloroformi
Syr. aurantii flores., āā ..... ʒii 60
M. Sig.: One tablespoonful after each meal.

The irritation causing the gastric irritability, such as tuberculosis of the pharynx, larynx or epiglottis, must be properly treated. As palliative measures the following combinations are recommended:

℞. Pot. bromidi 3i 4
Glycerini ..... ʒi 30
M. Sig.: Paint the pharynx before each meal; or:

℞. Cocainæ hydrochlor ..... gr. xxiv 1 | 65
Aquæ ..... ʒiii 90
M. Sig.: Paint the pharynx when nausea appears; or:

℞. Diiodoformi 3ii 8
Cocainæ hydrochlor. ..... gr. i | 06
Morph. hydrochlor. ..... gr. 3/4 | 05
M. Sig.: To be used as an insufflation when the larynx is involved.

Administration of Gelatin.

According to Racchi in the *Practitioner*, gelatin when administered in a normal serum solution is absorbed more rapidly when given in the form of an enema than by the hypodermic method. It is absorbed and shows its beneficial effect within five or ten minutes and continues for five or six hours.

Sodium Chlorid in Scrofula.

Liegois, according to an abstract in the *Monthly Cyc. of Pract. Med.*, states, in those conditions recognized under the term scrofula, that the chlorid of sodium enhances the appetite and increases the flow of salivary, gastric, biliary and pancreatic secretions and aids assimilation. The combustion of albuminoids is especially increased. This salt opposes the loss of phosphates and influences and assists endosmosis and exosmosis. There is marked effect on the blood also. The erythrocytes are increased and the hemoglobin percentage is higher. The following combination is recommended:

℞. Sodii chloridi ..... gr. iss | 09
Calcii phosphatis ..... gr. iii | 20
Calcii carb. ..... gr. 1/6 | 01
M. Ft. chart. No. i. Sig.: One such powder four times a day after meals.

The Use of Alkalies for Relieving Pain.

According to an abstract in the Pract. Med. Series of Year Books, Sir Lauder Brunton calls attention to the use of alkalies in relieving pain, especially that caused by toothache. The presence of acid in the carious tooth is the cause of the pain, and it has been demonstrated how the pain disappeared by the application of sodium bicarbonate. It is also of value in general aching of the teeth due to retracted gums. Alkalies relieve the sharp stinging pain accompanying furuncles, the pain in such cases being due to diminished alkalinity of the blood of the system in general as well as locally. Consequently he advocates alkalies both internally and locally in some cases of neuralgic and painful affections.

Pruritus.

Brocq, in *N. Y. and Phil. Med. Jour.*, gives the following combinations as of value in the treatment of pruritus:

℞. Resorcin ..... gr. iv | 25
Hydrarg. chloridi mitis ..... gr. xii | 75
Zinci oxidi ..... gr. xxx 2
Petrolati 3v 20
M. Ft. unguentum. Sig.: Apply locally; or:

℞. Menthol ..... gr. iii | 20
Acidi carbol. ..... gr. iv | 25
Acidi salicylici 3ss 2
Zinci oxidi 3iss 6
Liq. petrolati ..... ʒi 30
M. Ft. unguentum. Sig.: Apply locally to the affected parts.

In pruritus of the vulva, Verchére, in the same periodical, recommends the following:

℞. Hydrarg. bichloridi ..... gr. xv 1
Alcoholis 3i 4
Aq. rosæ 3v 20
Aq. destil. ..... ʒvii 210
M. Ft. lotio. Sig.: Apply locally twice a day.

A. Robin advises the following to relieve the foregoing condition:

℞. Spts. chloroformi 3ii 8
Olei amygdalæ dulcis ..... ʒii 60
M. Sig.: Apply locally; or:

℞. Hydrarg. bichloridi
Ammon. chloridi, āā ..... gr. ii | 12
Emuls. amygdalæ ..... ʒvi 180
M. Sig.: As a local application; or:

℞. Orthoformi
Diiodoformi
Talci, āā 3ii 8
M. Ft. pulvis. Sig.: Apply locally; or:

℞. Menthol ..... gr. ¾ | 05
Guaiacol ..... gr. viiss | 50
Zinci oxidi 3iiss 10
Liq. petrolati ..... ʒi 30
M. Ft. unguentum. Sig.: Apply locally.

To relieve the pruritus arising from eczema of the ear, Lichtenstein recommends ointments in preference to lotions.

He employs, in addition to Lassar's paste, the following combinations:

℞. Olei cadini 3ss 2
Liq. petrolati 3v 20
M. Ft. unguentum. Sig.: Apply locally; or:

℞. Hydrarg. oxidi flavi .....gr. xv 1
Liq. petrolati 3iv 15
M. Ft. unguentum. Sig.: Apply locally.

According to Hyde, carbolic acid ranks first as an antipruritic, used in strength of 1 to 5 per cent. It may be combined as follows, according to Bronson, who uses it in a strong solution:

℞. Acidi carbol. 3i-ii 4.-8
Liq. potas. 3i 4
Olei lini .....℥i 30
M. Sig.: Apply locally only over small areas.

Hyde recommends the following as a valuable lotion to relieve the pruritus of eczema:

℞. Acidi carbol. .....gr. xl 2 | 65
Zinci oxidi 3i 4
Glycerini 3ii 8
Aq. calcis q. s. ad.....℥viii 240
M. Sig.: Apply locally.

Or one of the following combinations:

℞. Acidi hydrocyanici dil. 3ss-ii 2.-8
Zinci oxidi
Calamini, āā 3i 4
Aq. calcis
Aq. sambuci, āā .....℥iv 120
M. Sig.: Apply locally; or:

℞. Acidi carbol. 3ss-3ii 2.-8
Bismuthi subnit. 3i 4
Pulv. tragacanth. .....gr. xl 2 | 65
Aq. calcis .....℥viii 240
M. Sig.: To be applied locally; or:

℞. Acidi carbol. .....3iss-℥ss 6.-15
Glycerini 3ii 8
Menthol .....3i-℥ss 4.-15
Spts. vini rect. q. s.
Aq. destil. q. s. ad .....℥viii 240
M. Ft. lotio. Sig.: Apply locally.

Trigeminal Neuralgia.

Graham Brown, according to the *Courier of Med.*, recommends quinin in the treatment of neuralgia of the fifth nerve, given in two or three doses of ten grains each. Sodium salicylate may be given, but it is not so active as quinin. The following combination is also recommended as even more serviceable:

℞. Quininæ sulph.
Sodii salicylatis
Antipyrini, āā .....gr. v | 30
M. Ft. chart. No. i. Sig.: One such powder every three or four hours.

He also advises aspirin in doses of grains 5 to 15 (.30-1.00). Butylchloral hydrate is very useful in such conditions combined with glycerin. Morphin should be resorted to only after all other remedies have failed.

Medicolegal.

Duty of Carrier When Passenger Becomes Sick.—The Supreme Court of Kansas holds, in Atchison, Topeka & Santa Fe Railway Company vs. Parry, that it is the duty of a carrier of passengers to exercise reasonable and ordinary care in looking after and protecting one who becomes sick or unconscious while a passenger. Whether such care has been exercised is ordinarily a question of fact for the jury.

No Action Maintainable by Posthumous Child.—The Supreme Court of California holds, in the case of Daubert vs. Western Meat Company, an action brought to recover damages for a man's death, that, where a child is unborn and its existence unknown to the party sued in such a case at the time a judgment in favor of the widow or other heirs is given, an action can not be maintained by the child after its birth, notwithstanding the provisions of section 29 of the Civil Code, to the effect that an unborn child is deemed to be in existence so far as necessary for its interests in the event of its subsequent birth. Whether the same rule would apply in a case where the existence of an unborn child was known to the party sued, at the time of the previous action and trial, the court says it was not intended to be here decided.

Communication to Undischarged Superseded Physician.—The Supreme Court of Kansas says, in the case of E. Patterson & Son vs. Cole, that a physician was employed to attend a patient who had suffered a personal injury. Afterwards the family physician came, and practically took charge of the case. Later, and within a few hours, the physician first called and again visited the patient, to inquire as to his condition, but administered no treatment. On this visit a statement was made to him by the patient as to the cause of the injury. The physician stated that he did not then regard himself as an attending physician, but admitted that there had been no discharge. The patient, on the other hand, stated that he regarded the doctor as his physician when the statement was said to have been made. The Supreme Court holds that, that being true, the relation of confidence existed, and the statement was rightly excluded on the ground that it was privileged.

Death from Medicine Taken to Allay Pain.—In the case before the Supreme Court of Missouri of Dezell vs. Fidelity and Casualty Company there was involved a policy of accident insurance which insured "against bodily injuries sustained through external, violent and accidental means," and which provided that "this insurance does not cover . . . injuries, fatal or otherwise, resulting from poison or anything accidentally or otherwise taken, administered, absorbed or inhaled." The court holds that the better reason supports the rule that such exceptions in such policies do not cover medicine (even though it contain poison) or anything taken or administered in good faith to alleviate physical pain, even though it results in unexpected and unintentional death. In this case, the death of the insured was caused by the effects of morphin contained in a prescription for neuralgia given him by his physician which he had had refilled, and the court holds that, so far as the provisions of the policy quoted were concerned, the beneficiary who brought this action was entitled to a verdict as a matter of law.

Skill Required of Surgeon—Not Insurer of Patients.—In the malpractice case of English vs. Free, according to the statement of the Supreme Court of Pennsylvania, the party suing had a car body fall on him, crushing him to the ground and seriously if not permanently injuring the hip joint. He was taken to the office of the party sued, a practicing surgeon, who examined the injury, gave morphia and had him sent to his home. The surgeon continued to treat the case for about four months. Two other surgeons during that time were also called in to see the patient. At the end of that time the surgeon sued told the patient he could do nothing more for him and ceased his attentions. As his hip was not well, and the leg shorter than the other, the man went to Pittsburg and entered a hospital, where the injury was diagnosed as a dislocation of the hip joint, and treated as such, the patient in about two weeks recovering and returning to his home. He claimed, however, and offered evidence tending to show, that there had not been a complete restoration of the limb to its normal condition, and that this result was owing to an incorrect diagnosis of his injury by the surgeon sued, and who, as he alleged, did not treat it as a dislocation, which it subsequently proved to be. The Supreme Court holds that a nonsuit was rightly entered. It says that it is settled law in this class of cases that "a surgeon undertakes to possess, and in the treatment of a case to employ, such reasonable skill and diligence as is ordinarily exercised in his profession; and in judging of the degree of skill, regard is to be had to the advanced state of the profession at the time." Taking this to be the law, the burden was on the party suing to prove, at least by the weight of the evidence, that the surgeon sued failed to treat him with reason-

able professional skill. The court thinks that he failed in this proof. It says that the surgeon beyond question was a skilled one, in good repute; he gave attention to the case; he called in to aid him two competent surgeons. It might be that he was mistaken in his diagnosis. The undisputed testimony of quite a number of surgeons, called as witnesses, was that this injury was such that it was very difficult to detect its exact character. The hospital surgeon, who, after putting the patient under the influence of an anesthetic, correctly diagnosed the injury as a dislocation, then reduced it, then by careful treatment practically cured him, testified that in the early stages of the injury it was sometimes exceedingly difficult, and almost impossible, to detect the exact character of the injury; that he had known such injuries to be only correctly diagnosed by the use of *x*-rays. And such was substantially the testimony of all the reputable surgeons called on either side. Taking the testimony of the party suing in its most favorable aspect, it only showed, not that the surgeon did not bring to the treatment of the case reasonable skill and diligence, but that he might have been mistaken in not finding out its exact nature. To hold him answerable for not exercising more than ordinary professional skill would be imposing on him a burden heavier than the law has yet put on the professional man's shoulders. A surgeon is not an insurer of his patients.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical News, New York.

October 3.

1 *The Use of the X-Rays in the Treatment of Diseases of the Skin, Certain Forms of Cancer, of the Glandular System and of Other Diseases, and as a Means of Relieving Pain. Francis H. Williams.
2 *Treatment of Migraine. B. K. Rachford.
3 *Paroxysmal Hematuria (Hemoglobinurie à Frigore). W. Gilman Thompson.
4 Removal of a Heavy Silk Ligature from Around the Right Pneumogastric Nerve; Clinical Symptoms Before and After Removal. Charles A. Powers.
5 A Review of Some Recent Investigations Relating to the Pancreas. T. Stuart Hart.
6 *The Obstetric Significance of Retrodisplacements of the Uterus. Samuel M. Brickner.

1. **The X-Rays.**—Williams finds the *x*-ray the very best method of treatment of numerous skin disorders, such as eczema, psoriasis, acne, sycosis, lupus, etc. In Hodgkin's disease, which has heretofore been hopeless as regards treatment, it seems to promise good results. Tuberculosis of the lung is still in the experimental stage, but good results have been reported and also in chronic tuberculous peritonitis. He also mentions conjunctivitis of long standing as yielding to these rays, and he remarks on their analgesic and tonic effects. As regards tumors, he thinks the rays promise the best modification of treatment for superficial new growths. As regards the deeper ones, great care must be taken in the selection of cases to avoid injuries and obtain good results. The dangers of *x*-ray injuries are mentioned, and he notes as a remarkable property of the rays their power of passing through healthy tissue without damaging it to bring about healing in unsound tissue beyond. The paper is illustrated with cases showing good results.

2. **Migraine.**—Rachford's theory of migraine is that it is an auto-intoxication, a constitutional trouble principally due to hepatic insufficiency causing a non-destruction of toxins which would otherwise be destroyed by the liver. He gives formulas for treatment. The following is the one which is principally recommended:

R.	Sodii sulphatis (dry)	gr. xxx	2
	Sodii salicylatis (from wintergreen).	gr. x	65
	Magnesi sulphatis	gr. l	3 25
	Lithii benzoatis	gr. v	33
	Tinct. nucis vomicæ	gtt. iii	2
	Aquæ destil. to make	℥iv	120

M.

Modifications of this are also given. The formulas are analyzed. Magnesium sulphate is necessary to overcome the constipation and unload the portal circulation. Sodium sulphate acts much the same way. Nux vomica is largely to overcome the soapy taste, but sodium salicylate is the remedy *par excellence*, acting not only as an intestinal antiseptic, but as a stimulus to the function of the liver. This formula is made up in large quantities and put up in siphons charged with carbonic acid and sold on prescription at 50 or 60 cents. The adult patient is directed to take from one-fourth to one-half glass of this mixture each morning half an hour before breakfast, the only dose during the day. Other remedies mentioned are sodium benzoate in 20-gr. doses after lunch and dinner; sodium salicylate, salol or cannabis indica in ¼-gr. doses two or three times a day for the paroxysms. Another drug which has had a deservedly good reputation is mercury, and he has used it to great advantage in the form of gray powder in the treatment of migrainous conditions in children. For the attack itself he advises rest in bed in a dark room without food. If the attacks are very severe, citrate of caffein, 2 gr., and antipyrin, 10 gr., with 30 gr. of bromid of potassium in half a glass of water, sometimes substituting sodium salicylate for the antipyrin, and proper dieting. Hygienic treatment is essential. The patient should not be allowed to eat too much. Coffee, alcohol, sweets and red meats should be limited or eliminated from the diet. Exercise in the open air, etc., and general massage are advised.

3. **Paroxysmal Hematuria.**—This disorder is defined by Thompson as a profound neurosis, chiefly affecting the vasomotor system and called into activity by exposure to moderate degrees of cold, by muscular fatigue or mental emotion. He reports cases and discusses the theories of the disorder. The treatment is mainly satisfactory in the syphilitic forms, but patients who have to expose themselves to cold may do well to avoid mental and bodily fatigue and be warmly clad. Stimulants should be prohibited. Medicines, as a rule, are not of much value. The attacks may be aborted by hot baths or putting to bed with hot-water bottles or blankets, by taking simple hot draughts or hot milk. Diffusible stimulants are useful.

6.—See abstract in THE JOURNAL of July 4, p. 52.

American Medicine, Philadelphia.

October 3.

7 *Practical Consideration on Intestinal Anastomosis. Theo. A. McGraw.
8 *The Lymph Circulation in Modern Medicine. Hugh A. McCallum.
9 The Causation and Treatment of Postnasal Discharge. Perry G. Goldsmith.
10 *The Complications of Hypertrophy of the Pharyngeal Tonsil. George B. Wood.
11 *Surgery of the Upper Right Quadrant of the Belly. J. F. Binnie.
12 Chronic Lead Poisoning. John J. Gilbride.
13 Holiday Repair vs. Climacteric Decay. John Knott.

7. **Intestinal Anastomosis.**—McGraw reviews the conditions that call for operation in the intestine or at the pylorus and notices certain peculiarities. He points out the symptoms which characterize pyloric obstruction or obstruction in the upper portion of the duodenum, mainly indigestion, eructation, distended and prolapsed stomach, increase of pain, vomiting consisting of mucus and blood as well as ingesta, absence of bile and swelling at the left of the median line as a rule. These may be simulated by the nausea of pregnancy or nervous nausea, but never by chronic dyspepsia. There should be no indecision when this train of symptoms appears, but surgery should be called in. He thinks that operation will usually be successful in pyloric obstruction so long as the ejecta consist solely of fluid and colorless mucus, but when the vomiting becomes green, or especially black, he refuses to operate. The question of the method is discussed. He points out the advantages which he claims for his elastic ligature. Its application is very simple. The two viscera are brought together and the surgeon connects them with a single line of Lembert sutures, a little longer than the desired opening. The rubber cord is then, by means of a large needle, passed through the walls of first one and then of the other bowel and tied firmly in a single knot. Before tying it, however, a silk thread is laid under the knot, and after the knot has been firmly tied with the rubber stretched to its utmost, the silk thread is

made to fasten it in place. Both threads are then cut short and the Lembert suture is now completed so as to form a ring enclosing the rubber. In passing the rubber through the gut it should be stretched in order to lessen the size and drawn slowly and carefully through in order not to tear the gut. Of course, the rubber must be fresh and first-class, as old rubber may break. The advantages of the procedure are its simplicity and rapidity, its aseptic quality, for the rubber fills the openings through which its passes, preventing extravasation; delay in opening the passage until the intestines have become well glued together, and the ability to make with it a communication of any desired length. If we compare it with the incision and suture it is much more easily and quickly performed, much more aseptic; it causes less hemorrhage and is less liable to dangerous complications from faulty technic than the Murphy button. The disadvantages which have prevented its more general use are the fact that the surgeon can not see the opening that he makes. He closes the abdomen on still intact intestines and is obliged to put his trust in the slow, unseen action of a constantly contracting rubber cord, but it is only after repeated trials of its efficiency that he learns to have confidence in the procedure.

8.—See abstract in THE JOURNAL of September 5, p. 626.

10. **Hypertrophy of the Pharyngeal Tonsil.**—The conditions accompanying overgrowth of the pharyngeal tonsil, which Wood declares is a distinct organ, are described in detail by him. He says the tonsils are of no more importance than the ordinary lymph gland, and their removal, therefore, offers no objection. He divides the complications of hypertrophy of the pharyngeal tonsil into two groups: mechanical and infectious. Mouth breathing is almost purely a mechanical complication, but may produce conditions favoring infection. He thinks that many children who appear backward at school are so because of aprosexia, as it has been called, or failure of attention connected with this condition of adenoids. Skeletal deformities, such as chicken breast, narrowing of the alveolar arch of the upper jaw, etc., are frequently due to mouth breathing, though the latter is due more to poor nourishment than to any mechanical influences. The most serious complications due to hypertrophy of the pharyngeal tonsil are otitic disturbances. While involution of the tonsil usually takes place between the ages of 10 and 20, he has seen the pharyngeal tonsil well developed in persons of 40. He closes with the statistics of the dispensary records of the Children's Hospital with a total of 361 patients with nose and throat trouble. Of these 149 were hypertrophy or adenoid growths; 87 of these being boys and 62 girls. Nasal discharge or recurrent attacks of coryza were present in 78 cases; some form of ear trouble was present in 63, or 42 per cent. Symptoms of nasal obstruction were present in 117, or 78 per cent. Headache was present in 28 cases, 19 per cent.; cough in 45 cases, or 30 per cent. All these symptoms depend on the adenoid hypertrophy and disappear after removal of the growth. When a number of such symptoms are present he believes a tentative diagnosis can be made in the majority of cases.

11. **Surgery of the Upper Right Quadrant of the Abdomen.**—Binnie draws attention to the easily neglected fact that biliary lithiasis and empyema of the gall bladder are not the only affections of the right upper quadrant of the abdomen which are open to surgical relief.

Medical Record, New York.

October 3.

14 *A Case of Diffuse Gonococcus Infection of the Entire Upper Extremity, with Notes on the Occurrence and Course of Gonorrheal Septicemia. Charles A. Powers.
15 *The Manic Depressive Psychosis and Some of Its Etiologic and Pathologic Phases. Walter D. Berry.
16 Causes, Consequences and Care of the Injuries to the Parturient Canal. Benson M. Feldman.
17 *The Selection of the Anesthetic in Children. S. J. Kopetzky.
18 *An Operation for Removing the Tonsils. William H. Steers.

14.—See abstract in THE JOURNAL, xl, p. 1670.

15. **Manic Depressive Psychoses.**—Berry describes this condition as understood by alienists and reports a case. He calls attention to the danger of consanguineous marriages and of heredity in these cases.

17. **Anesthetics in Children.**—Kopetzky says that the claim that the use of chloroform is safer than the employment of ether with children is not borne out by close observation. This is especially true in robust and healthy children. It is dangerous because an overdose may be easily given. Cardiac failure may set in at the beginning of the administration because of the violent and dangerous struggles which take place, and the tendency to push the anesthetic is too tempting. Cardiac syncope following vomiting may occur at any time during the administration of chloroform, or after, and result fatally. On the other hand, nitrous oxid is quick in action, without dangerous symptoms, and when followed by ether from a closed inhaler, rapid evaporation from the lung is avoided and ether pneumonia does not occur. In conclusion he warns against the practice of commencing short operations on the nose and throat and eye before complete anesthesia has been induced; also the practice of using chloroform in the upright position.

18. **Tonsillotomy.**—Steers recommends the use of a hook-like knife modeled from a strabismus hook, with a longer and stouter handle and with a knife edge on the concavity and the end of the hook. The finger of the operator is passed over and around the tonsils to detect any pulsating vessels and the lower tonsil is seized with a volsellum and drawn toward the opposite side. The described hook-knife is then passed between the tonsil and the anterior pillar of the fauces, just beneath what he terms the basement membrane of the tonsil, care being taken that it is not passed into the tonsil mass, but beneath its basement membrane. The finger of the operator is then introduced into the wound, and making sure that pulsating vessels can not be felt, and using the finger as a blunt dissector, the mass is turned out, thus leaving it attached only to the posterior pillar and by mucous membrane only, which is divided by an ordinary blunt-pointed tonsil bistoury. Hemorrhage is free at first, but ceases promptly. If any bleeding vessels are present they are seized with forceps and treated as in any other situation. When removed it will be found that the base of the tonsil is covered by a thin membrane and that the dissection has been carried on entirely outside the tonsil. Without turning the patient the other tonsil is then removed in the same way. After the wounds have healed it will be found that the pillars of the fauces stand out in their proper position and their muscles act freely. There will be no return of the tumor. He thinks we may guard against most hemorrhages by careful palpation and dissection outside the tonsillar tissues and by completely removing the growth.

New York Medical Journal.

October 3.

19 *Modern Treatment of Fractures, with Special Reference to Lower End of Humerus and Bones of the Leg. H. S. McConnell.
20 *The Sources and Methods of Infection in Pulmonary Tuberculosis. J. O. Cobb.
21 Essential or Idiopathic Spasm. William C. Fiske.
22 *A Form of Rational Treatment for Corneal Ulcers. William L. Phillips.
23 Growths of the Male Urethra, with Report of Three Cases. Joseph E. Morrow.

19. **Fractures.**—McConnell condemns the ready-made splint and pleads for immobilization of fractures, the use of absorbent cotton and the making and adjusting of plaster-of-paris strips. Ordinary plaster-of-paris bandages he considers a relic of barbarism. In retaining fractures in children, especially of the lower end of the humerus involving the joint and of all fractures or displacements above or below the joint, he uses absorbent cotton. He cuts out absorbent cotton strips, folding them over to get the desired length and thickness, and with two bands of this kind puts the limb in the desired position and adapts them as he would ordinary splints. He first employed this method by accident, but has since used it in fifteen cases altogether, greatly to his satisfaction. In putting up fractures of the lower end of the humerus he objects to the method of flexion and thinks extension is much better, as it has the advantage of enabling one to examine the dressings with a minimum of distress to the patient. In the treatment of fractures of the leg he uses for a permanent dressing splints

of cotton flannel, the lateral ones overlapping the more posterior one, and also the foot, holding it at right angle to the limb, covered and stiffened with plaster of paris, to be applied after temporary dressing with the long wood splints, the posterior one being retained with the permanent dressing. The advantages of these overlapping splints made in this way with the spine of the tibia exposed is that it makes a light, firm, close-fitting dressing; the absence of cotton wadding permits the splint to mold itself, and the use of one layer of wide gauze bandage makes it impossible to constrict the member; the spine of the tibia being exposed any deviation in alignment is readily detected. Lateral inspection is facilitated by cutting the bandage between the side splints, lowering one or both, and again tightening them with straps. At any time, grasping the two side splints between the two hands any looseness will be discovered. This form of dressing immobilizes the knee, ankle joint and fractured bones and maintains the foot at a right angle. If proper care and skill have been used in the application, it will be unnecessary to remove the posterior splint until union has occurred, and last, but not least, the patient can lie on his side, sit up, or place the limb in any position he desires. McConnell criticises the use of passive motion in fractures in or near the joint at any time until after the fourth week. In conclusion he says our objects in the treatment of fracture should be: 1. Restoration of function. 2. Maintenance of the symmetry of the member. These should be accomplished by procedures that are as comfortable to the patient and as little annoying to the surgeon as is consistent with the object desired.

20. **Tuberculosis.**—Cobb reviews the various theories of infection in tuberculosis, showing that foreign matter can be inhaled directly into the lungs and that it may also reach the lungs through the intestinal tract. In cattle he holds infection is caused by ingestion of infected sputum in the case of the cow, of tuberculous milk and offal in swine, and in birds and fowls by picking in their own infected dejecta. In man, while he admits the inhalation possibilities, he thinks the principal avenue of infection is through the ingesta. Milk he does not consider an important factor, basing his opinion largely on the great frequency of tuberculosis among the Chinese and other people that do not use milk to any extent. His personal opinion is that tuberculosis can be conveyed both by inhalation and ingestion, but largely, if not principally, by infected food, the common house fly being the medium of conveyance from the ejected sputum to the food on which it alights.

22. **Corneal Ulcer.**—The rational treatment here described by Phillips consists in the use of adrenalin to contract the arteries, mild antiseptics, like boric acid, to antisepticize the conjunctival sac, nuclein solution, 5 per cent. (the hypodermic solution being less irritating), to build up the lymph corpuscles to a healthy condition; lastly, he would treat the conditions that have a bearing on the disease. In many cases the ulcer originates from other diseased parts, such as caries, adenoids, hypertrophies of the turbinates, etc. He would drop the suprarenal extract into the eye three times a day, and if the severity of the disease increases, the medicine must be instilled oftener, depending on the absorption of the drug and its action on the heart. The eye should be kept clean with warm boric acid solution, the nuclein solution being combined with and given in the same way as the suprarenal. Adrenalin chlorid 1-1000 does not seem to produce the same effect as does the suprarenal and chloretone when combined with the nuclein solution.

Boston Medical and Surgical Journal.

October 1.

24 *Urethral Tuberculosis, with Report of a Case. Arthur L. Chute.
25 *A Note on the Transmission of Whooping Cough by Indirect Contagion. John Lovett Morse.
26 The Ill Health of Francis Parkman. (Concluded.) George M. Gould.

24. **Urethral Tuberculosis.**—After detailing a case Chute discusses the literature and the characteristics of the disorder. In the cases which have come to autopsy he finds there have been almost invariably other lesions of the genito-urinary tract, and tuberculosis of the urethra may have been secondary to them. Lesions of the prostate, epididymis and vesicles are almost always associated with infection by extension. The question whether urethral tuberculosis may be primary is still an open one, but in most cases it is unquestionably secondary. The symptoms, aside from hematuria, are gleety discharge, pain on urination, nodular conditions and obstruction. The painful erections from which his patient suffered seem to have been unusual. Tubercle bacilli in the discharge is indisputable proof. Granulations or multiple ulcers of the urethra are almost pathognomonic. A urethral discharge with no history of exposure to venereal infection is suggestive, especially if no gonococci can be found. The prognosis depends largely on the primary disease. Most of the reported cases have been fatal and recovery will necessarily be tedious. The treatment will depend on the primary disorder. Hygienic measures usually hold a most important place. Chute is doubtful as to the local treatment. Where a stricture or infiltration offers an obstruction, of course surgical measures are required, and also where there is spongiosum involvement with cavities the tuberculous cavities should be laid open, or where the urethra is greatly ulcerated, perineal urethrostomy may give relief and may bring about recovery. In some very advanced cases amputation is the best procedure.

25. **Whooping Cough.**—Morse has been repeatedly asked whether whooping cough could be carried by a third party, and he wrote a circular letter to the members of the American Pediatric Association and received replies from forty. Three of them reported 5 cases, one of which seemed rather doubtful. Opinions vary as to its possibility. He thinks it hardly possible to draw positive conclusions. The cases which were given seemed to justify the assumption that whooping cough can be carried by a third person, but the fact that forty members of so wide experience see so few cases proves that it must be very rare.

St. Louis Medical Review.

September 26.

27 Report of a Case of Myasthenia Gravis. Francis Reder.

October 3.

28 A Successful Case of Cholecystenterostomy with the Murphy Button. H. C. Dalton.

Cincinnati Lancet-Clinic.

October 3.

29 Myeloid Leukemia; Report of a Case, with a Brief Résumé. H. G. Marxmiller.
30 Surgery of the Prostate, Pancreas, Diaphragm, Spleen and Thyroid. (Continued.) B. Merrill Ricketts.

Medical Fortnightly, St. Louis.

September 25.

31 Sleep. William F. Barclay.
32 A Contribution to the Study of the Etiology and Pathology of Renal Disease. Henry Jacobson.
33 *The So-called Granular Degeneration of the Red Blood Corpuscles. C. Fisch.
34 Exophthalmic Goiter; Report of a Case. M. A. Bliss.

33. **Granular Degeneration of the Red Corpuscles.**—This phenomenon, which has been attributed to degenerative processes, is held by Fisch to be rather a regenerative one. It is normal in the fetus and also in certain animals. It disappears in anemic cases before death; if it were retrogressive he could not explain why it should be limited before death. He cites other reasons which confirm his opinion as to its non-degenerative character. He thinks the granulations have a nuclear origin.

Pennsylvania Medical Journal, Pittsburg.

September.

35 *The Value of the Peristaltic Movements of the Intestines as Elicited by Auscultation in the Diagnosis of Non-penetrating Wounds of the Abdomen, with Remarks on the Diagnosis in General. O. C. Gaub.
36 Flat-foot. James W. MacFarlane.
37 *The Choice of a General Anesthetic in Ophthalmology. Edward Jackson.
38 Eye Strain and Functional Disorders. Charles A. Wishart.
39 Ear Diseases in General Practice. I. P. Klingensmith.

35. **Intestinal Peristalsis in Diagnosis.**—Gaub has studied experimentally and otherwise the diagnostic value of intestinal peristalsis as a sign of intestinal injury in cases of non-penetrating abdominal injuries. He operated on dogs and concludes that if any lesion of the gastro-intestinal tract occurs the peristalsis usually returns with general subsidence of the

symptoms of shock. Often the absence of peristaltic movement, he concludes, is not of sufficient value to determine the celiotomy, and the increase of the pulse rate, 120 or over, if peristalsis is present, does not justify opening the abdomen. If an accumulating exudate is found by palpation and percussion, operation is necessary. If all means to prevent shock have been exhausted and the pulse rate is small and rapid and peristaltic movement absent at the end of four hours, exploratory operation is justifiable. The facial expression and the presence of rigidity and tenderness may often be sufficient to induce operation at a still earlier date.

37. **The Anesthetic in Eye Operations.**—Jackson finds that nitrous oxid anesthesia is too brief for some cases and not entirely without danger, but the principal objection to it is the intense venous congestion it causes. While ether is unquestionably less dangerous than chloroform, its irritating qualities are to some extent against it. Chloroform is objectionable on account of the danger of cardiac inhibition, and if operations about the face are specially prone to cause such accidents, those about the orbit can be no exception. He speaks favorably of ethyl bromid, but it must be used with all the precautions observed in the administration of chloroform. Rapidity of recovery may be a drawback if the administration is not closely watched. It certainly is unsuited for use in cases of prolonged operation. General anesthesia may be required if the eye is severely inflamed. Nitrous oxid and bromid of ethyl are hardly to be considered in these cases. For enucleation of the eyeball, or the extirpation of tumors within the orbit, the greater safety of ether will generally decide in its favor, but venous congestion is against it in the difficult dissections deep in the orbit. Where the actual cautery is required ether is contraindicated on account of its inflammability. Ethyl bromid is not satisfactory for the destruction of embedded powder grains, because the anesthesia is liable to be incomplete, but it is especially appropriate for strabismus operations in young children. He would not allow it to be employed except when administered by an experienced person drop by drop, as in the case of chloroform.

Therapeutic Gazette, Detroit.

September 15.

40 A Treatment of Osteitis Deformans and Osteoarthritis. Frank E. Peckham.
41 *Clay Paste. J. Frank Wallis.
42 Adenoids as a Cause of Enlarged Tonsils and Other Pathologic Conditions. W. G. B. Harland.
43 A Rational, Rapid and Efficient Remedy for Gonorrhea. W. H. Whitehead.
44 Some Facts in Regard to the Use of Strychnin. A. L. Benedict.

41. **Clay Paste.**—Wallis finds a mixture of wet sterilized clay for application in skin diseases has decided advantages. It has, beside its property of holding water and thus assisting osmosis, some therapeutic virtues depending on the mineral salts present, not overlooking the antiseptic, alterative, astringent and sedative properties peculiar to certain of the absorbent earths. Clays containing a large percentage of kaolin are preferred, and the dressing kept constantly moist by the application of a wet towel several times a day. To further prevent its becoming dry, he modifies his preparation by adding vaselin or lard, incorporating the fat with the paste by the aid of an emulsifying agent, the best of which is ichthyol. His standard paste contains 50 parts of kaolin and 25 each of water and petrolatum, with 4 per cent. ichthyol. Of course, the formula can be modified. In eczema rubrum of the leg, this formula may require a larger amount of kaolin and a diminished amount of vaselin. He thinks care should be taken to avoid an excess of ichthyol, which is irritating in certain forms of eczema. Glycerin should be used in this combination with caution, as it may cause discomfort and increased inflammation.

St. Paul Medical Journal.

September.

45 *The Diagnosis of Incipient Pulmonary Tuberculosis. Christian Johnston.
46 Acute Osteomyelitis. H. E. Frost.
47 The Medical and Surgical Treatment of Suppurative Affections of the Middle Ear. Cornelius Williams.
48 Pericarditis in Children. Walter R. Ramsey.
49 *The Boundary Line Between Chronic Alcoholism and Alcoholic Insanity. Arthur W. Dunning.
50 Two Cases of Tetanus Which Recovered. J. C. Boehm.
51 Immobilization of the Lower Jaw. John T. Rogers.

45. **Tuberculosis.**—Johnston points out that the so-called incipient and curable cases of tuberculosis are, for the most part at least, those of the so-called pretubercular condition, and that when the disease is fairly advanced in the great majority of cases there is little hope of its cure. There are certain cases where signs of tuberculosis exist, and yet the disease is absent, such as those with bronchiectasis, the result of a former bronchitis, and exceptionally in case of consolidated lung tissue after pneumonia. Old cicatricial tubercular lesions are present, he thinks, in quite a percentage of people after 30 years of age. When these patients are run down they usually cough a great deal and present symptoms of tuberculosis without actually having the disease. He thinks such cases swell the list of cures of consumption. In another class of cases the disease may be quite curable where the tendency to fibrosis is so strong that the infective process is kept within bounds. The main trouble, however, in the diagnosis of early consumption is the late recourse to treatment of the patients themselves. The diagnosis of pulmonary tuberculosis in its early stage, whether characterized by general weakness, loss of weight, chronic dyspepsia, etc., is a matter of weeks, and sometimes of months.

49. **Chronic Alcoholic Insanity.**—Dunning thinks the importance of recognition of alcoholic insanity is very great, but is often exceedingly difficult. The profession, therefore, should make a more careful study of the chronic alcoholic and be able to distinguish between the sane and insane alcoholic cases. The state should also be induced to provide for prolonged restraint and control of that class of periodic insanity known as dipsomania as well as other types of alcoholic insanity. When we are satisfied that a man is insane, he thinks, we should stand by our conviction regardless of lawyers or the popular notion that common drunkenness accounts for the erratic behavior.

Maryland Medical Journal, Baltimore.

September.

52 A Case of Purpura Hemorrhagica, with Hemorrhage Into Brain, and Death. Arthur Wegefarth.
53 *How Should a Modern City Protect Its Water Supply? Charles O'Donovan.
54 Suggestions Concerning the Prevention of Serious Complications in Ear Diseases. Hiram Woods.

53. **Protection of the Water Supply.**—O'Donovan recommends that cities should buy up large tracts of territory, including the water sheds from which their water supply is derived, and forest it, making it a sort of public park, a part of which might be used as a pasture, but cultivation should be excluded, and any land which is liable to produce silting into the streams from which the water is derived should be acquired and devoted to forests or pasture. In this way a double purpose will be served, a revenue would be at the same time acquired, the city would have a public park and the water supply would be purified.

International Medical Magazine, New York.

September.

55 Certain Abnormalities of the Umbilical Cord Giving Rise to Dystocia. William R. Nicholson.
56 Paresis of the Confusional Type. William Pickett.
57 *Some Suggestions in the Management of Children Predisposed to Phthisis. Albert McConaghy.
58 Heart Cases in Summer. William F. Waugh.
59 Two Interesting Deformities Occurring in Children. One Congenital, the Other Acquired. I. Valentine Levi.
60 A Case of Carditis. L. H. Bernd.
61 Methods of Treatment in Gastro-intestinal Diseases; Removal of Cause of Chief Importance. Boardman Reed.

57. **Tuberculous Disposed Children.**—McConaghy recommends the use of moderately cold baths by rubbing, the avoidance of muffles, stocks and furs, and the taking of a glass of hot or cold water on rising, the use of breathing exercises in a well-aired room, regular habits of defecation after this exercise, playing in the sun at least an hour every day, the encouragement of proper carriage of the body with chest upward and forward, nose breathing and deep breathing, sleeping on a bed without a pillow and the limitation of studies.

American Practitioner and News, Louisville, Ky.

August 1.

62 Relation of Academic to Medical Education; the Typical Physician. William H. Wathen.
63 Exostosis of Orbit, with Report of a Case. D. C. Bowen.

64 Laceration of the Bowel, without External Evidence of Injury; Report of a Case, with Remarks on Diagnosis. E. B. Claybrook.
65 Some Observations on a Crusade Made Against the Mosquito in Talladega During Summer of 1902. B. B. Sims.
66 Pulmonary Anesthesia. W. A. Bryan.

Ophthalmic Record, Chicago.

October.

67 Tuberculosis of the Conjunctiva. Edward Jackson.
68 The Systematic Use of Cylinders in Making the Shadow Test. Alexander Duane.
69 *An Uncomplicated Fourth-Nerve Paralysis of Traumatic Origin. James W. Dunn.
70 *Will Certain Occupations in Time Affect the Cylindrical Curvature of the Eyeball? Paul Guilford.

69. **Uncomplicated Fourth Nerve Paralysis.**—In the case reported by Dunn the man fell, striking the back of his head. He soon apparently recovered, but the next morning diplopia was present in the lower field. The only other symptom was the contusion on the back of the head. The treatment given was iodid of potash and mercury internally and galvanism, soon changed to iodid alone and local applications of faradism. Improvement began in four weeks and remained stationary for about a month, when the double vision suddenly disappeared. Dunn thinks this precludes any possibility of fracture of the base of the skull, and that, as in the cases reported by Leber, the lesion was rupture of the trunk of the fourth nerve by concussion.

70. **Curvature of the Eyeball.**—Guilford finds that railroad engineers show very markedly greater flattening of the eyeball than do other persons of the same age, and attributes it to pressure of the wind. The engineer sits in his cab with head out, usually looking directly forward, and presses his eyelids close against the ball to protect the eyes from dust, etc., which tends to flatten the cornea. He says if this is true with locomotive engineers might it not be true perhaps to a lesser extent in others engaged in outdoor occupations exposed to the wind.

Southern California Practitioner, Los Angeles.

September.

71 *The Roll of the "Ball-valve" in the Etiology of Appendicitis. C. Van Zwalenburg.
72 *Pernicious Anemia. E. L. Leonard.
73 The Recent Epidemic Among the Whittier School Boys Apparently Caused by Ptomaine Poisoning. W. V. Coffin.
74 The Differential Diagnosis of Conjunctivitis and Iritis. George J. Lund.
75 Excision of the Tongue for Cancer. Walter Whitehead.

71. **The "Ball-Valve" in Appendicitis.**—Van Zwalenburg describes the different anomalies in appendicitis and explains his theory as to the action of the loose bodies and the ball-valve in producing symptoms. He concludes as follows:

To sum up, my argument is: 1. That the ball-valve is an important factor in many cases of appendicitis, I am inclined to say the majority. 2. That in some cases, at least, the ball-valve is the principal factor and directly responsible for the acute attack. 3. That the pressure on the blood vessels of the mucosa and submucosa is the cause of the infection, and of the necrotic changes. 4. That a number of the symptoms of appendicitis are evidence of obstruction or strangulation. 5. That the first condition, being purely a mechanical one, practically a strangulation, the importance of immediate operation follows as a corollary. In conclusion, may I suggest that you distend a few appendices as I have indicated, and note the pressure effects, instead of splitting them all open immediately to see the concretion.

72.—This article has appeared elsewhere. See THE JOURNAL, xl, 718, p. 1541.

Wisconsin Medical Journal, Milwaukee.

September.

76 *A Note on the Relation of Neuralgia to Altitude, with Report of Two Cases. F. Savary Pearce.
77 *Hemorrhage Into the Cranial Cavity Following Injury to the Skull. Charles H. Lemon.
78 Report of a Case of Tuberculosis of the Adrenals, with Pathologic Specimens. Julius Noer.

76. **Altitude in Neuralgia.**—Pearce reports two cases of facial neuralgia, one of which was badly affected by residence at a height of 2,500 feet above the sea level, the other by residence in Denver at an altitude of one mile above the sea level. Residence in a lower altitude decidedly benefited the condition. He suggests that there is quite a field for study as to the effect of climate and altitude on disease.

77. **Brain Hemorrhage.**—Lemon holds that all cases of brain congestion and laceration should be operated on, but as many cases give symptoms out of proportion to the actual injury, instead of waiting for classical symptoms to show themselves when signs of cerebral compression are present and the life of the patient is imperiled, the physician should select some plan for relieving the undue tension. The reasons for making a window in one of the long bones within the first forty-eight hours for osteomyelitis are no greater than those for making one in the skull for the same purpose of relieving tension. He thinks we should in future be more on the lookout for signs of compression and use the trephine and chisel more promptly to allow the products of inflammation to escape. Three cases illustrating his ideas are reported.

Brooklyn Medical Journal.

September.

79 *The Lateral and Retro-positions of the Immobile Uterus; Their Clinical Significance and Treatment. Edward J. Ill.
80 A Case of Fracture of the Skull, with a Very Prompt Epileptic Sequence. Calvin F. Barber.
81 *Some Observations on the Treatment of Neurasthenia at the Dispensary Clinic. Cecil MacCoy.
82 Does Lodge Doctoring Pay? Robert E. Coughlin.
83 Surgical Treatment of Congenital Clefts of the Palate in Infants. Truman W. Brophy.

79. **Lateral and Retropositions of the Uterus.**—The special subject of Ill's article is displacement and fixation caused by the short sacral and short broad ligaments, and not due to inflammation or adhesions, scars or tumors. The first writer who mentioned lateral displacement as producing symptoms was Schultz of Vienna, but since then Burrage of Boston has noticed the subject. Lateral displacements seem to be acquired during childhood or possibly are congenital. If the former is the case, the symptoms begin with the onset of menstrual life. The symptomatology is not very varied. There is usually pain in one or the other iliac region, most commonly on the side of the longer ligament, sometimes severe enough to prevent exercise, and it even has caused the recommendation of removal of the ovary. The pain increases at the menstrual epoch, and it usually takes the patient several days to recover. A sensitive spine or painful coccyx are occasionally observed, and these are commonly the most hopeless cases. In the case of short, sensitive uterosacral ligaments there is constant backache, located at the sacrum or lower lumbar region. In many of these cases occipital or vertex headache or both are present. With one uterosacral ligament short and sensitive, the pain is commonly referred to the sacroiliac synchondrosis of the short side. Most patients become more or less neurasthenic. The prognosis is bad if the case is of long duration. In the severer cases he has suggested thorough stretching of the short uterosacral or broad ligament under complete anesthesia. After stretching the ligaments until the uterus is freely movable he concludes by curetting and packing. The result is usually good. In one or two cases extirpation of the uterus has been suggested as a last resort for the relief of complete invalidism and the results have been good. Pregnancy may relieve the condition to some extent. It is most common in the unmarried and sterile married.

81. **Neurasthenia.**—MacCoy gives an account of the dispensary treatment of neurasthenia. He remarks that acquired neurasthenia seldom develops much before 25 years of age, and frequently not until long after that period. The neurotic instability of the hereditary is one of the most important factors. The physician must remember that there is a weakness of all the functions, mental, physical and moral, but there is always something to work on. Many cases improve greatly under simple medication and change in the habits of life. He remarks on the importance of a cheerful manner toward these patients and of psychic treatment generally. The treatment is quite as much psychic as pathologic, and he ascribes importance to positive assurances as to recovery and the insistence on certain directions. On the second visit the patients almost invariably report an improvement. Simple sedatives have done much for their sleep, the intestinal canal has been cleaned out and a regularity of life has become more or less established. The reason for their improvement is explained to them. When you have gained their confidence you can begin to make more complete the educational manage-

ment which has been begun so well. Sponge baths at bedtime of tepid water are valuable, as is also electricity, though it is not the important agent that the electric enthusiast would urge. He would forbid tea, coffee and alcohol as a rule, and substitute hot water, cocoa and milk. The patients should take only such food as agrees with them. Neurasthenic patients are very amenable to suggestion and the physician who fails to avail himself of this loses a large part of his medical armamentarium.

Western Medical Review, Lincoln, Neb.

September 15.

84 The Treatment of Nevi. John Prentiss Lord.
85 Some Interesting Operative Cases: Suppurating Fibroid of the Uterus; Prolapsus of the Uterus and Bladder; Goiter; Gunshot Wound of the Stomach. J. W. Bullard.
86 *Surgery of the Biliary Passages. Byron B. Davis.
87 *The Advantages of the Davison Ligature to Modern Surgery. A. G. Hamilton.
88 Thrombosis of Arteries Following Secondary Shock; Report of a Case. J. E. Summers, Jr.
89 *A Simple Method of Internal Anastomosis. H. M. Hepperlen.
90 Omental Anastomosis or Operations for Establishing a Collateral Circulation of the Portal Blood; a Successful Schiassi Operation. J. P. Lord.
91 Thrombosis of the Lateral Sinus and Jugular Vein; Abscess of the Lung; Recovery. H. Gifford.

86. **Surgery of the Biliary Passages.**—The following points are emphasized by Davis:

1. A symptom-producing gall bladder so seldom ceases to give trouble without surgical treatment that an early operation before permanent crippling has been done is the safest. 2. In simple, uncomplicated cases of cholelithiasis or catarrhal cholecystitis, with practically a normal gall bladder, cholecystotomy with drainage until infection has disappeared is usually safe and most convenient. 3. Atrophied gall bladders with thick, friable and inelastic walls, those with destruction of more or less of the mucous membrane, and especially those where the cystic ducts are not free, should be removed, as this offers the best chance for complete cure. 4. Stone in the common duct should be removed by incision without suture of the duct. 5. In cases of temporary obstruction of the common duct, cholecystotomy is the safest method of relief until the obstruction disappears. 6. In permanent occlusion of the common duct the best results are obtained by anastomosing the gall bladder with the bowel. 7. The same line of treatment is applicable in all cases of cholecystitis and cholangeitis, whether or not complicated by gallstones.

87. **The Davison Ligature.**—The principal feature of this ligature is described as a simple reverse bowknot tied at each end of the wound, four or five inches from the end of the strand, allowing the ends of the strand to protrude from the angle of the wound, so that it can be untied and pulled out. It is recommended by Hamilton as a convenient and easily removable buried suture. Coarse silkworm gut is the material used, and the ligature offers good chances for certain sterility, accurate layer approximation of the tissue and the removal of buried sutures when healing is completed, capillary drainage from each layer, rapidity of the application, slight scarring of the skin, and all the advantages of permanent buried suture without the danger of further irritation and extrusion of the knot. It has also the advantages of an unabsorbable suture without the danger of sepsis, and without producing a nidus for septic germs from the blood current during absorption.

89. **Intestinal Anastomosis.**—Hepperlen uses a gelatin cylinder over which he sews the gut, inserting a few interrupted sutures through all the coats of the bowel to hold the parts, then using a suture of his own. He uses a fine intestinal silk twenty-four inches long, doubled, with a needle on each end, having the knot where the ends of the silk are tied in the center. He starts the first suture under the mesentery attachment, inserting a needle with each hand at the same time through the two outside coats of the bowel, an eighth of an inch from the cut margins, picking up a loop about one-twelfth of an inch in length, according to the method of Lambord, drawing the parts together and tying them at every stitch, continuing until he has completely encircled the bowel, closing the mesentery opening with the same suture, being careful to pass the needles under the small vessels in the peritoneal coat, so as not to unduly constrict the blood supply. He claims the advantages of simplicity, rapidity of work without handling the parts, firmness of union of the bowel ends. With the aid of the capsule and the suture recommended above, the end-to-end anastomosis may be performed in five to ten minutes.

Medical Examiner and Practitioner, New York.

September.

92 Longevity a Question of Adrenal Sufficiency. J. Leffingwell Hatch.
93 The Clinical Significance of Arteriosclerosis. Reginald H. Fitz.
94 A Study on Light. J. Mount Bleyer.
95 Some Practical Points in Urinalysis. H. Lapere Sayler.

Atlanta Journal Record of Medicine.

September.

96 Some Social Factors That Tend to the Degeneration of the Race and Alcoholism. R. R. Kime.
97 Address, American Laryngological, Rhinological and Otological Society. Dunbar Roy.
98 The Status of the Drug Business in Atlanta. Samuel A. Visanska.
99 The International Quarantine Bureau. J. M. Lindsley.

Journal of Nervous and Mental Diseases, New York.

September.

100 Gigantism and Leontiasis Ossea, with Report of the Case of the Giant Wilkins. (To be continued.) Peter Bassoe.
101 Studies on the Cerebral Cortex in the Normal Human Brain and in Dementia Paralytica. (To be continued.) G. Alfred Lawrence.
102 Cases of Combined Morphin and Atropin Poisoning. Philip Zenner.
103 A Note on Periodic Insanities, with Report of Three Cases of Intermittent Melancholia. Alfred Gordon.

Cleveland Medical Journal.

September.

104 The Ill Health of the Poet Whittier. George M. Gould.
105 The Object to Be Attained by an Organization of Assistant Physicians. A. P. Ohlmacher.
106 The Antitubercular Dispensary. John H. Lowman.

Detroit Medical Journal.

September.

107 Why We Should Not Wait for Group Symptoms Before Undertaking a Paracentesis or a Mastoid Operation, with Demonstration of Specimens. Emil Amberg.
108 The Principles of Medical Ethics. Frank B. Tibbals.
109 A Case of Retained Catheter. L. W. Howk.
110 Septic Mastoiditis without Perforation of the Membrana Tympani. Don M. Campbell.
111 Neurasthenia. A. W. Ives.

Mississippi Medical Record, Vicksburg.

October.

112 Importance of Uncinariasis to the Southern Practitioner. Isaac Ivan Lemann.
113 Two Cases of Typhoid Fever. S. Myers.
114 Report of Foreign Bodies in the Ear and Throat. M. H. Bell.

Virginia Medical Semi-Monthly, Richmond.

September 25.

115 The Serum Precipitation Test for the Identification of Blood Stains. J. W. Mallet.
116 Address of President Before the Medical Society of Virginia. J. N. Upshur.
117 Treatment of Rheumatism. A. A. Nefe.
118 Methods to Hasten Epidermization, with Special Reference to Skin Grafting. Stuart McGuire.
119 Chyluria. M. D. Hoge, Jr.
120 Present Status of Serum and Organotherapy. J. McKee Sites.
121 Gunshot Wound of Bowels; Seven Perforations; Laparotomy; Recovery. Lewis Holladay.

Carolina Medical Journal, Charlotte, N. C.

September.

122 A Study of Salpingitis. H. A. Royster.
123 Diet in Nephritis from the Chemical Standpoint. H. W. Richardson.

Dominion Medical Monthly, Toronto.

September.

124 *Address, Canadian Medical Association. W. H. Moorehouse.
125 The Early Days of Ovariotomy. Matthew D. Mann.
126 *Some Business Aspects of Medical Practice. N. A. Powell.
127 The Country Doctor. J. S. Sprague.
128 *The Renal Aspect of Arteriosclerosis. John Caven.

124.—This article appeared elsewhere. See THE JOURNAL of October 10, ¶123, p. 935. See abstract in THE JOURNAL, September 12, p. 680.

126.—Ibid., ¶129, p. 935.

128.—Ibid., ¶125, p. 935.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

September 26.

1 *Discussion on Leprosy: Its Etiology, Histology and Treatment. Jonathan Hutchinson and others.

2 Biliary Abscesses of the Liver, with Operation. Leonard Rogers.
3 *Lathyrism. A. G. Hendley.
4 *A Plea for the Proper Medical Supervision of "Refreshments" Purveyed on Railways in the Tropics, with Special Reference to India, and for Better Latrine and Lavatory Accommodation for the Traveling Indian Public. H. D. McCulloch.
5 Varioloid Varicella in Trinidad: Observations on Its Nature, Origin and Mode of Spread Based on the Observation of 4,029 Cases. J. R. Dickson and C. F. Lassalle.
6 *Tropical Malaria and Its Prophylaxis. H. Marcus Fernando.
7 *Plague in Domestic Animals. James Cantlie.
8 Notes on Operations for Conical Cornea. A. Stanford Morton.
9 Extraction of Cataract in the Capsule. Henry Smith.
10 Subconjunctival Injections of Tuberculin T. R. in the Treatment of Interstitial Keratitis. A. Darier.
11 On the Treatment of the More Serious Syphilitic Diseases of the Eye. A. Darier.
12 A Discussion on Eye Changes in Relation to Renal Disease. Edward Nettleship and others.
13 The Corneal Lesions of Acquired Syphilis. Sydney Stephenson.
14 The Use of Retinal Extract in Atrophic Retinæ. Robert W. Doyne.
15 Epithelial Plaques of the Conjunctiva. W. T. Lister and W. I. Hancock.
16 The Mechanism of Accommodation in Man. Karl Grossmann.
17 The Treatment of Concomitant Convergent Strabismus. Gustavus Hartridge.
18 Convergent Squint: Methods of Preserving or Restoring the Sight of the Deviating Eye and of Establishing Binocular Vision. Claud Worth.
19 Fixation of the Eye During Operation. J. Tatham Thompson.
20 An Operation for Ptosis. H. Collen Ensor.
21 Preliminary Note on the Pathology and Diagnosis of Spring Catarrh. H. Herbert.
22 Further Note on the Superficial Punctate Keratitis of Bombay. Major H. Herbert.
23 Modified Mules' Glass Ball for Use After Removal of the Eye. Adolph Bronner.
24 Knee-jerk Phenomenon in Interstitial Keratitis. N. Bishop Harman.
25 An Improved Operation for the Relief of Ptosis. N. Bishop Harman.

1. **Leprosy.**—Hutchinson discredits the contagion of leprosy, claiming that experimental inoculation with one very dubious exception has always failed. It is infrequently transmitted from the husband to the wife. It is of widespread prevalence where it occurs, but nowhere common, and nothing like epidemic prevalence is ever observed and large sections of the population are almost wholly exempt. Attendants in leper hospitals never contract the disease. Lepers residing in England, France and America at the present day never become foci from which the disease spreads. When leprous communities are removed to a distance the disease dies out and when the social conditions are changed the same is true. He points out the arguments in favor of his fish theory, admitting that it is not the quantity but the quality that is responsible. He lays it to decayed or badly cured fish instead to the fish *per se*. Among the arguments he offers are that the fish hypothesis explains its antiquity, its widespread prevalence in local districts, and its excessive incidence in connection with the Roman Catholic religion; explains the dying out of the disease in connection with the advance of civilization and its persistence in certain localities where a large consumption of poorly cured fish exists, as also its great prevalence in the middle ages and its absence from mid-Russia. It also accounts for *de novo* and sporadic cases.

In the discussion which followed by Drs. Manson, Sambon, Cantlie, Hillis and others, the fish hypothesis was not generally favored.

3. **Lathyrism.**—This disorder, which is characterized by a paralysis of the lower limbs, with spasm of the thigh adductors and exaggeration of the reflexes without disturbance of sensation, bladder or rectum involvement or participation of the upper limbs of the trunk, is discussed by Hendley, especially as relating to its etiology. He comes to the conclusion that it is a form of intoxication not exclusively due to the diet of lathyrus, which only produces a predisposition to it. Its immediate exciting cause is exposure to cold, rain and damp weather. This explains the immense predominance of males affected with the disease and its occurrence in the rainy season when they are out and exposed in their work. It does not seem to be dangerous to life, but the paralysis is not curable. The spinal cord does not seem to be involved as a rule, though a softening above the lumbar enlargement has been found in one case by Scheube.

4. **Railroad Refreshments in the Tropics.**—The danger of taking meals at railroad stations, etc., the need of better latrine and lavatory service, especially in India, are emphasized by McCulloch, who gives instances of the evils which he says exist. Even the drinking water and every kind of refreshment is likely to be infected.

6. **Tropical Malaria.**—The methods of meeting tropical malaria, which is usually of the severe type, are discussed by Fernando, who finds that destroying the mosquito larvæ over sparsely populated districts is impracticable, and mosquito-proof houses on a large scale are also impossible for the natives, whose simple mud houses generally cost them practically nothing, and they can afford no better. He thinks in dealing with malaria in a district the following points should be insisted on:

1. A prompt search for cases of fever as fast as they occur with efficient treatment. If necessary, or otherwise practicable, malaria should be included in the list of infectious diseases whose notification to the local sanitary authority is compulsory. 2. The continued treatment of fever cases after the attack is over to prevent relapses. 3. The systematic treatment, especially during the non-fever season, of the cases of anemia and other forms of debility induced by chronic malarial poisoning. The above measures represent the least that can be expected from a sanitary authority in the treatment of malaria in an infected district, and it is gratifying to observe that when such measures are effectively carried out a great deal will have been done to exterminate the disease. The surest prophylaxis consists in efficient treatment.

7. **Plague in Domestic Animals.**—Cantlie points out the dangers of plague in the lower animals, which render the question of its prophylaxis a much broader one than has been heretofore considered. Not merely domestic animals may be infected, but marmots, bats, pigeons and probably many others are likewise susceptible.

The Lancet, London.

September 26.

26 *Perforation in Typhoid Fever, with an Account of Two Cases of Recovery After Surgical Treatment. Hector W. G. Mackenzie.
27 Some Problems Arising from the Variations in the Development of the Skull and the Brain. Johnson Symington.
28 A Case Presenting Signs of Pulmonary Stenosis During Life, Unexplained by the Necropsy, with Some Remarks on Diagnosis. W. L. Ascherson.
29 A Note on Tonsillar Enlargements and Their Treatment. Lawrie H. McGavin.
30 *On Some Uncommon Forms of Neuritis of the Upper Limb, with an Unusual Etiology. W. B. Warrington.
31 Remarks on Three Cases of Acute Intestinal Obstruction. T. Crisp English.
32 A Note on a Case of Puerperal Septicemia Treated by Antistreptococcic Serum. John M. Mackenzie and W. B. Blandy.
33 *A Clinical Comparison of the Maternal Pelvis and of the Fetus in Europeans, Eurasians and Bengalis, and the Enunciation of a New Law, in Accordance with Which the Size of the Child at Birth Is Determined. Clayton Arbuthnot Lane.

26. **Typhoid Perforation.**—This condition, as here pointed out by Mackenzie, is much more frequent than is sometimes thought to be the case, occurring as it does in 3 or 4 per cent. of all cases and causing at least 25 per cent. of deaths. Mackenzie shows that it may occur even in the mildest cases, most frequently, however, in males, and that it is apparently most frequent about the third or between the second and fourth weeks. Its site is usually in the last twelve inches of the ileum, in which the ulceration is most severe. The symptoms are more or less characteristic. He discusses them at some length and concludes that every case of typhoid fever should be looked on as one of possible perforation for which the medical man should be prepared. He recommends a careful study of the schedule of instructions drawn up by Osler as to the duty of the nurse in watching the pulse, condition as to pain, condition of the abdomen, whether distended, flat or contracted, the presence or absence of respiratory movement, tenderness, rigidity of muscles, spasm, temperature, respiration, its frequency and character. If the physician suspects perforation he would do well to at once summon a surgeon, the one he has selected as operator, and to see that provision is made against shock, with sufficient hot water bottles, blankets, stimulants, etc., with suitable table and good light for operating and other means, especially in private houses. A number of cases are reported. The prognosis is certainly better than it used to be looked on, as large a proportion as one-third having been recorded as recovered in some statistics.

30. **Neuritis of the Arm.**—The cases reported by Warrington illustrate Erb and Duchenne's palsy of the upper part of the brachial plexus and Klumpke's palsy of the lower part, the uniradicular paralysis described by Buzzard where the lesion is limited to one of the nerves forming the brachial plexus; a case of monoplegia and one of localized multiple neuritis, a paralysis of the fifth peripheral nerve and a professional or occupation paralysis, which in some cases is due to actual neuritis, and others apparently the result of pressure or overuse.

33. **The Maternal Pelvis.**—Lane has studied the proportions of the maternal pelvis in the European, Eurasian and Bengalis, and formulates from the results of his studies the following law: "The child grows *in utero* in such a manner and at such a rate that at full term his size is proportional to that of the mother's pelvis through which he has to pass in order to be born." The weight of the child and its size at birth has a distinct relation to the pelvis, and the biparietal diameter of the child increases correspondingly with the conjugate diameter of the pelvis through which it will ordinarily pass at birth. The mechanism by which this law is maintained is, he thinks, that of ordinary natural selection.

Journal of Tropical Medicine, London.

September 15.

34 An Account of Anti-malarial Work Carried Out with Success in Selangor, One of the Federated States of the Malay Peninsula. (To be continued.) E. A. O. Travers.
35 Municipal Sewerage. Major F. Smith.
36 A Breeding Place of Certain Forest Mosquitoes in Malaya. G. F. Leicester.

Annales de Dermatologie et de Syphiligraphie, Paris.

Last indexed page 341.

37 (IV, No. 7.) *Le liquide céphalo-rachidien des syphilitiques en période secondaire. P. Ravaut.
38 *Le liquide céphalo-rachidien des tabétiques. G. Milian.
39 De l'adénome sébacé circonscrit. C. Audry.
40 Les recherches récentes sur le sang dans la syphilis. P. Pagniez.

37. **Cerebrospinal Fluid in Secondary Stage of Syphilis.**—Ravaut gives the particulars of 84 cases of secondary syphilis in which the cerebrospinal fluid was examined. They indicate that every intense and persisting cutaneous manifestation in syphilis generally coincides with a reaction on the part of the nervous system. In most of the patients there were no symptoms, except the findings in this fluid, to suggest the parallel involvement of the nervous system. In 34 cases with slight and transient cutaneous manifestations the cerebrospinal fluid was normal in all but 3, while in 36 with pigmented or papulous syphilides the fluid showed an evident reaction. Possibly a second examination might have shown that these exceptions, too, conformed to the rule. The findings in the cerebrospinal fluid paralleled the course of the cutaneous affection, but did not seem to bear any relation to the frequency or intensity of the headaches observed in some cases. He classes the findings as follows: marked reaction, with 20 to 150 leucocytes in the field; moderate, with 7 to 20; slight, with 4 to 6 leucocytes, and negative, with none, or at most 2 or 3 leucocytes to the field. They were exclusively lymphocytes. In 3 cases a few polynuclear cells could also be discovered and occasionally a few large mononuclears were found among the lymphocytes, but took the stain poorly. No red corpuscles were ever found. It is impossible to draw conclusions from the facts cited, but they demonstrate how promptly and how insidiously the nervous system is affected by the syphilitic virus. They also apparently confirm Brissaud's theory that the virus has a special affinity for the ectoderm, and suggest the necessity for energetic specific treatment, admitting that these reactions are a new symptom of syphilis in full activity, demanding immediate treatment.

38. **Cerebrospinal Fluid in Tabes.**—Milian has been studying the behavior of this fluid in tabes, and his findings in 20 cases show that stationary tabes with a tendency to latency has a normal cerebrospinal fluid, while there is slight lymphocytosis in those cases of tabes of slow progress, the syphilitic infection of remote date. Pronounced tabes with ataxia is accompanied by decided lymphocytosis, and likewise incipient tabes consecutive to recent infection. The lymphocytosis in tabes does not seem to be modified by mercurial treatment, contrary to what is observed in the lymphocytosis of hemiplegia from arteritis, which rapidly improves under treatment. This fact seems to support Fournier's assertions in regard to the parasyphilitic nature of tabes.

Presse Medicale, Paris.

41 (No. 75.) De l'hérédité mitrale. E. Hirtz.
42 La dysenterie. Maladie septicémique. M. Guibaud.
43 Relations Between Diabetes and Acromegaly and Exophthalmic Goiter. A. Lorand (Carlsbad).—Sur les rapports du diabète avec l'acromégale et la maladie de Basedow.
44 *Detection of Koch Bacilli in Pathologic Products. E. J. Masselin.—Recherche des bac. de Koch dans les produits path.

44. **Detection of Tubercle Bacilli by Inoscopy.**—Masselin corroborates Jousset's assertion that his inoscopy allows the detection of tubercle bacilli even very scantily present in the organic fluids. He reviews his extensive experience with it, and adds that if the results are negative he never dismisses the case as positively non-tuberculous until inoculation of guinea-pigs has also resulted negatively. In Behring's address below, inoscopy is also referred to as a notable progress. [The technic was given in THE JOURNAL, page 546, paragraph 46, of the last volume. It reveals the bacilli in organic fluids in which they have hitherto escaped detection. It is based on the fact that bacteria become entangled in the fibrin of organic fluids. By dissolving out the fibrin with a pepsin digesting mixture the bacilli are set free and can be obtained by centrifuging for examination under the microscope.—ED.]

Centralblatt f. Chirurgie, Leipsic.

Last indexed page 641.

45 (XXX, No. 30.) Incision for Appendicectomy *à froid*. E. Beer (New York).—Ueber eine Schnittfuhrung für Resektion der Appendix im anfallsfreien Stadium.
46 (No. 31.) *Ueber die Operation der puerperalen Mastitis. E. Hopmann.
47 (No. 32.) *Zur Radikal-Operation nach Lotheissen des Schenkelbruches (of femoral hernia). J. Gilli (Graz).
48 (No. 33.) *Eine neue Operations-Methode des Caput obstipum. L. Wullstein (Halle).
49 Modification of Maydl's Operation for Exstrophy of Bladder. P. A. Müller (Dresden).—Abänderung der Borelius'schen Modifikation der Maydl'schen Operationsmethode bei kong. Blasenektopie. (See also No. 37.)
50 (No. 34.) *New Method of Reducing Posterior Dislocation of Hip Joint. J. Elgart (Brunn).—Neue Repositionsmethode für hintere Hüftgelenkverrenkungen.
51 (No. 35.) *Turning Back a Costal Arch Flap. G. Marwedel (Aachen).—Die Aufklappung des Rippenbogens zur Erleichterung operativer Eingriffe im Hypochondrium und im Zwerchfellkuppelraum.
52 Cholecystenterostomie verbunden mit Enteroanastomose. D. Maragliano.
53 (No. 36.) *Zur operativen Herzmassage (massage of heart). P. Sick (Kiel).
54 *Transactions of Thirty-second German Congress of Surgery.
55 (No. 37.) *Technik der Radikal-Operation des Schenkelbruches (of femoral hernia). P. Herzen (Moscow).
56 (No. 38.) *Zur Anwendung des Adrenalins bei anesthesierenden Gewebs-Injektionen. H. Braun (Leipsic).

46. **Operation for Puerperal Mastitis.**—Hopmann describes the method of operative treatment of puerperal mastitis followed by Bardenheuer of Cologne. It avoids any disfigurement; leaves the milk glands nearly intact, especially those in the anterior portion of the breast, while the abscesses can be thoroughly evacuated and drained. A semi-circular incision is made around the lower half of the base of the breast, which is detached with the fingers from the fascia of the pectoralis major and turned back like a large flap. This allows ample access to the abscesses, which are opened by radial incisions and evacuated. A wide drain tube is left in each pocket and the breast is replaced. As the drains project in the most favorable manner for drainage at the lowest points, the abscesses heal rapidly. The only trace of the intervention is usually hidden by the overhanging breast. He has recently operated by the same technic in two cases of bursitis prepatellaris, making the incision below the knee, turning back the semicircular flap of soft parts and extirpating the bursa from below.

47. **Radical Operation of Femoral Hernia.**—Gilli mentions that he has discovered that operation is remarkably facilitated by cutting across Poupart's ligament and the falciform process (superior cornu). This not only favors operative intervention, but materially shortens the time required.

48. Operation of **Caput Obstipum.**—Wullstein not only relieves the caput obstipum by severing or partially removing the contracted muscle, but does not regard the operation as completed until he has shortened the unduly long, stretched part of the muscle, thus obviating the necessity for tedious after-treatment to accomplish this. He shows in a cut how easily the muscle can be shortened by taking up a loop in it, suturing the loop flap by sutures along the edges and occasional ones in the center of the flat expanse.

50. **Reduction of Dislocation of Hip Joint.**—Elgart has the patient recline on the floor and places the dislocated limb over his own knee as he kneels beside him on one knee at a right angle to the patient's body. By the leverage thus obtained reduction according to Kocher is rendered much simpler and easier.

51. **Costal Arch Flap for Operations on Hypochondrium.**—Marwedel makes a curved incision parallel to and a short distance from the costal arch, extending it from the ensiform process to below the tenth rib. The three ribs above are then divided at their cartilaginous union after pushing the muscles out of the way. It is then easy to turn back the soft parts and the ribs, leaving a broad opening into the cavity below, exposing the liver or the upper part of the stomach including the cardia and the subdiaphragmatic space. In two clinical cases in which this plan was followed the flap was cut and raised in a few minutes. The single abdominal wound healed by primary intention and seven weeks after the intervention the ribs were as solid as before.

53. **Resuscitation by Massage of Heart an Hour After Death.**—Sick reports that a lad of 15 was being operated on Dec. 13, 1902, at the Kiel clinic, on account of tuberculous peritonitis, when heart action and respiration ceased. Artificial respiration and König-Maas massage of the heart restored the respiration for a single minute or two, but it then subsided again, and after thirty minutes the youth was still cyanosed, pulseless, no respiration, the entire body growing colder and colder. The heart was then exposed by a Rotter incision and, forty-five minutes after the first signs of disturbance, massage was applied directly to the heart, supplemented by warm compresses. After fifteen minutes the heart gave signs of life, and in fifteen more minutes was beating regularly. Respiration was resumed, the pupils contracted to normal, the color returned and the pulse became good, although rather frequent. The pericardium was then sutured and the thorax flap replaced and sutured over the tampon. Two hours later the youth had regained consciousness and complained of thirst and dyspnea; respiration 60, pulse 144. Under camphor and saline infusion the condition remained about the same for twenty-four hours. The speech was indistinct, hurried but intelligible. Then symptoms of collapse were observed, the dyspnea increased and death ensued after three hours of coma. Signs of slight fibrinous pericarditis were found at the autopsy, and of old pleuritis, fresh recent tumefaction of spleen and liver, with tuberculosis of peritoneum and mesentery in an advanced stage. Sick remarks that the resuscitation might have been permanent in a subject less severely undermined. The action of the chloroform on the heart had evidently been magnified by the shock and the altered conditions in the circulation entailed by the laparotomy and evacuation of the ascites.

54a. **Action of Local Stimulation.**—Wessely describes experimental research on the eyes of rabbits which show that the application of warm compresses or local irritation induces a hyperemia accompanied by the rallying to the spot of the defensive antibodies in the serum. The proportion of albumin in the aqueous humor rose constantly from 1/40 per cent. to 1 and 2 per cent., and the agglutinating power increased ten to twenty fold. The same results were observed in the conjunctiva which proved a particularly favorable field for these investigations. He notes that the proportion of albumin, etc., did not rise when the parts had been previously treated with adrenalin, thus confirming the fact that the phenomenon is connected with the hyperemia. It is evidently the secret of the benefits from hyperemia in inflammatory conditions.

54b. **Artificial Substitution of Blood.**—Küttner is convinced by the results of the researches of Locke and Kuliabko that a fluid, to be an efficient substitute for the blood, must contain oxygen. Experiments on animals showed that much more than the ordinarily fatal loss of blood was well tolerated by rabbits if the substituted solution was impregnated with oxygen. He illustrates a mechanism for the agitation of salt solution with oxygen to effect this impregnation.

54c. **Improved Anesthesia of Nerve Trunks.**—Braun's announcement in regard to the manner in which the action of cocain is magnified by the addition of adrenalin has already been mentioned in these columns. He asserts that five drops of the 1 per 1,000 solution of adrenalin is ample to add to a .5 per cent. solution of cocain to ensure perfect anesthesia of the superficial nerve trunks. For the large subfascial nerve trunks a 1 per cent. solution of cocain may be necessary. Sometimes thirty minutes may elapse before the nerve conductibility is entirely suspended, but in the knee or elbow the endoneural injection is followed at once by anesthesia. He advises to apply the constricting band—if one is required—only just before commencing the operation. The anesthesia obtained by this combination of adrenalin with cocain or eucain lasts from two to five hours.

55. **Radical Operation for Femoral Hernia.**—Herzen describes the technic with which he has been very successful. After the hernial sac has been tied and removed and the stump reduced, he detaches the femoral vein and draws it to one side and Poupart's ligament upwards. He then dissects a flap of periosteum from the upper aspect of the pubis about the width of the femoral canal and about 1 to 1.5 cm. long, its base on the pectineus. This flap is then detached from the bone and turned back downward. Two to four small holes are then drilled through the pubis in such a way that the drill emerges always in the part exposed by the raising of the flap. The two ends of a bronze-aluminum wire are then passed from behind forward through Poupart's ligament and through two of these holes. By pulling on the wire the ligament is brought into intimate contact with the exposed part of the pubis. The flap of periosteum is then replaced and fastened with a couple of stitches. By this means the femoral ring is entirely closed while the ligament has taken its place, reinforced by the periosteum flap. He has thus treated a consumptive patient, and in spite of his violent coughing, the results of the operation have been perfect, healing rapidly with absolute freedom from any tendency to recurrence of the hernia.

56. **Application of Adrenalin in Anesthetizing the Tissues.**—Braun proclaims that experience with several hundred patients has confirmed his previous assertions in regard to the great value of combining adrenalin with cocain. He warns now in regard to the dosage, as too large doses induce such pronounced anemia that it is impossible to ligate the vessels, and when the anemia gradually passes away after-hemorrhage is possible and liable. This after-hemorrhage is not due to the adrenalin, but to the fact that during the anemia there can be no question of arresting any hemorrhage. Consequently it is imperative to use only the amount of adrenalin necessary to enhance the anesthetic action of the cocain or eucain, and not to suppress all hemorrhage from even the larger arteries, causing them to contract to such extent as to close their lumen. A good combination is two to five drops of the 1 per 1000 adrenalin solution to 100 c.c. of a 1 per cent. solution of cocain or beta eucain. The proportion is then .00007 to .00017 per cent. of the adrenalin. Application of this mixture blanches the parts, but the larger arteries still bleed and can be ligated. The influence on the anesthesia is equally pronounced with these small as with large amounts. In extracting teeth or for endoneural injection two drops of the adrenalin solution are ample to each c.c. of the cocain or eucain solution. He has never used more than five drops, equivalent to about 1/6 mg. of adrenalin, in any instance.

Centralblatt f. Gynaekologie, Leipsic.

Last indexed page 939.

57 (No. 36.) **Simulated Extra-uterine Pregnancy.** C. Schambacher.—Zur Frage der vorgetäuschten Extrauterin-Gravidität.

58 Rumpf's Operating Table. M. Wegscheider.—Der Operationstisch nach Dr. R.
59 (No. 37.) Modified Axial Traction Forceps. R. Freund.—Eine modifizierte Tarnier'sche Achsenzugzange.
60 Der sogenannte weisse Infarkt der Placenta. G. Schickele.
61 Zur Histogenese des Chorio-Epithelioms. L. Pick.
62 (No. 38.) Shall We Feel at Once Whether the Cord is Around the Neck After Head Is Born? B. S. Schultze (Jena).—Soll man gleich nach geborenem Kopfe danach tasten ob die Nabelschnur umschlungen ist?
63 Chloroform-Tod oder akute Urämie? F. Hammer.
64 Artificial Feeding of Infants. W. Zangemeister (Leipsic).—Ueber die künstliche Ernährung von Säuglingen.

Deutsche medicinische Wochenschrift, Berlin and Leipsic.

65 (XXIX, No. 39.) *Origin of Pulmonary Tuberculosis and the Combating of Tuberculosis. E. von Behring.—Ueber Lungenschwindsuchtentstehung und Tuberkulosebekämpfung.
66 Ueber das Verhalten der Typhus-Bacillen in der Milch und deren Produkten. R. Bassenge (Institute for Infectious Diseases, Berlin).
67 Der Negri'sche Erreger der Tollwuth (hydrophobia germ). Schüder.
68 Ueber die therapeutische Anwendung des Chlor-Baryums. v. Tabora.
69 Curability of Atrophy of Bone. E. Rose.—Die Heilbarkeit der progressiven totalen Knochen-Atrophie.
70 Critical Study of Sex-Determination Theories. C. Benda.—Das Problem der geschlechtsbestimmenden Ursachen.
71 Zur Hygiene des evangelischen Abendmahls (ritual communion). Focke.

65. **Origin of Pulmonary Tuberculosis and Means of Combating It.**—THE JOURNAL summarized on pages 1178 and 1266 of the last volume von Behring's important announcements in regard to the immunization of cattle based on the fact that the epithelial lining of the alimentary canal is not completely developed during early infancy, the gaps allowing the passage of albumin and bacteria like any very porous filter. The present article was an address at the Naturforscher Congress, in which he proclaims that time and experience have more than confirmed his previous statements. He reviews the brilliant results of the practical application of his method of immunizing cattle as carried out by stock raisers and dairy men, both in Germany and elsewhere, and states that the Prussian government is now considering the propriety of assuming the task of immunization of cattle by this method as an official department. Until recently Behring has carried it on from his private means. He maintains the identity of human and bovine tubercle bacilli, and preaches that the main source of phthisis occurring at any time during life is from infection through the milk taken during infancy, whether the tubercle bacilli in the milk are of human or bovine origin. The presence of a coughing consumptive in a family almost inevitably results in the infection of the infants by inhaling the germs or by their getting into the milk or on the vessels used. This is the secret of the so-called heredity and predisposition to tuberculosis in the members of a family. The infection is post-genital, not inherited. It may remain latent for years or for life, but under predisposing conditions it may develop into pulmonary tuberculosis, which is thus traced to infection in infancy. And it is to this age that we must apply not only prophylactic but immunization measures such as he has so successfully practiced in cattle. Immunity can be conferred by isopathic immunization or by antitoxin treatment. The former is the method followed with cattle, but is not feasible for children on account of its dangers at present. These will be obviated, however, if it proves possible to confer immunity by ingestion of the bacilli *per os* instead of the more dangerous intravenous route now in use. The prospects are more encouraging for immunization of infants by the antitoxin method. His hopes are becoming stronger and stronger, he says, that it will prove possible to confer immunity on infants by giving them the milk of highly immunized cows. The immunity thus obtained is not very lasting, but it may be supplemented by immunizing procedures with the living virus, such as have proved effectual in the prophylaxis of other diseases. One of the problems he is at present studying is to devise a means to preserve the antitoxin in the milk of the immunized cows so that it will keep and bear transportation. He speaks with commendation of Jousset's method of inoscopy as an invaluable means of detecting tubercle bacilli in the organic fluids. (See paragraph 44 above.) In regard to the tuberculin test, he mentions casually that Koch has reacted positively to the test, and that he himself ten years ago after a dose of 4 mgm. reacted with fever and was confined to bed for several days, thus convincing him of the tuberculous infection of his own body. He explains the reaction to tuberculin as the result of phenomena of coagulation and agglutination induced by the contact of this preparation of tubercle bacilli with the otherwise soluble antibody produced in the body by the action of the tuberculous lesion. He is inclined to believe that the smaller arteries in the vicinity of the infectious focus are the seat of the elaboration of this antibody. He reaffirms with emphasis that tuberculous infection is far from meaning inevitable phthisis. A combination of several factors is necessary for this result. He cites as an example the experience of Dr. M. Schmidt of Frankfurt, who, in his forty years of practice, has examined untold numbers of cases of tuberculosis of the larynx, and neither he nor any of his assistants have shown evidences of infection. Behring is hopeful of the day when immunization of man and cattle against tuberculosis will banish the sanatoria, etc., from the land as Jenner's vaccination has swept away the old-time smallpox hospitals in every town, but explicitly states that he has nothing definite yet to propose as far as man is concerned.

Muenchener medicinische Wochenschrift, Munich.

72 (L, No. 36.) *Does the Combustion of Sugar Entirely Cease After Removal of Pancreas? H. Lüthje.—Ist die Zerstörung des Zuckers nach Pankreas-Exstirpation vollständig aufgehoben?
73 *Influence of Concentration of Urine on Absence of Albumin Reaction. B. Hallauer.—Ueber den Einfluss der Konzentration des Harns auf den Ausfall der Eiweissreaktion.
74 *Zur Kenntniss des Gas-Gangrän. Dansauer.
75 2 Fälle chronischer zonen-förmiger Hauterkrankungen (cutaneous affections). F. Lommel.
76 *2 Fälle von Pons-Erkrankung. H. Steinert.
77 *Zur Diagnose und Therapie der Diphtherie. Curtius.
78 Acetozone Poisoning After Application of a Celluloid Cast. Cossmann.—Azetonvergiftung, etc.
79 *Tuberculosis Infection by Way of Intestines. L. Sorger.—Zur Entstehung der Tuberkulose vom Darm aus.
80 Infant Mortality from Social-Hygienic Standpoint. Ascher.—Zur Bekämpfung der Säuglingssterblichkeit vom sozial-hyg. Standpunkte.
81 (No. 37.) *Absorption of Lime in Relation to Rachitis. M. Pfaundler.—Ueber die Kalkadsorptiontierischer Gewebe und über die Grundlagen einer modernen Rhachitis theorie.
82 Zur Klinik des Adams-Stokes'schen Symptomenkomplexes. du Mesnil de Rochemont.
83 Perityphlitis und Leukocytose. R. Gerngross.
84 *Cerebral Bladder Disturbances. M. Friedmann.—Zur Kenntnis der cerebralen Blasenstörungen und namentlich des Rindenzentrums für die Innervation der Harnblase.
85 Function of Bladder and Rectum. E. Hirt.—Zur Lehre von der Funktion der Blase und des Mastdarmes.
86 *Improved Aspirating Pipette. E. Ebstein.—Ueber eine Verbesserung an kalibrierten Saugkapillären.
87 Improved Technic of Intubation. A. Rahn.—Ueber meinen Tubus und über das Herstellungsverfahren der Tuben überhaupt.

72. **Elimination of Sugar After Extirpation of Pancreas.**—Lüthje mentions in the first place that he was much surprised to find traces of the pancreas still left after what he supposed was absolutely complete extirpation. The microscope revealed particles of pancreas tissue *in situ*, which suggests that the contradictory results obtained in previous research may have been due to retention of more or less numerous scraps of the parenchyma. His experiments were all made on dogs, and even after complete removal of the pancreas the sugar did not disappear entirely from the urine until the animals had been kept for a time on a starvation nitrogen diet. The slightest addition of albumin to the diet—after the animals had been freed from sugar by being kept on the starvation diet—was immediately followed by the reappearance of sugar in the urine.

73. **Tests for Albumin in Concentrated Urine.**—Hallauer points out that the reaction to the albumin tests varies with the concentration of the urine, and consequently the latter should be diluted in case of a negative result to the test before accepting it as positively negative. After reduction of the urine to half its volume the most sensitive tests ceased to give the reaction previously obtained.

74. **Gas Gangrene.**—Dansauer reports a case and reviews the publications of others on the subject, and also the results of personal experimental research, concluding that the common colon bacillus is capable of inducing gas gangrene in the non-

diabetic living organism. It is not able to do this alone; its action is saprophytic and dependent on a primary local or general injury of the tissues from some nutritional disturbance either from trauma or deranged metabolism.

76. Focal Affection in the Pons.—In Steinert's 2 cases the presumptive diagnosis of a focal affection in the pons was based on a series of symptoms which he describes at length. The patients are still living and the diagnosis has not been anatomically confirmed. In the first case the paralysis of all the branches of the facialis was accompanied by hemiparesis, the Babinsky sign, hemianesthesia and violent hemihyperidrosis, but the pathognomonic symptom was the paralysis of certain ocular muscles for certain conjugated movements, normal for the rest. There was also transient paralysis of the palate on one side and absence of lachrymal secretion. Some of these symptoms subsided after a time and confirmed the assumption of an acute encephalitis pontis which had healed, leaving a defect. The inflammation was consecutive to a suppurative dental periostitis. Damianos has recently called attention to the possibility of a suppurative thrombophlebitis of the sinus cavernosus as a sequel to periostitis in the jaw. Among the symptoms presented by the second patient were complete lax hemiplegia, the Achilles jerk absent on the right side, the abdominal reflexes absent on both sides and the Babinsky sign present. After a time the Strümpell sign became evident on both sides. The gait was never that of a hemiplegic, but suggested that of ataxia. The patient was also annoyed by a sensation of heaviness in the entire right side, especially in that side of the head, and the atrophy of the muscles was more pronounced than usually observed in hemiplegia. The ocular disturbances were the same as in the first case, and vision was not impaired in either. [E. Schwarz of Riga reviews the differential diagnosis of pons affections in the *St. Petersburg Med. Woch.*, No. 35, and proclaims that absence of the pupil reflex on one side in the early stages testifies in favor of an intrapontine lesion, when noted in a syndrome suggesting involvement of the base of the brain. He describes 2 cases in detail with postmortem findings in one. The ocular symptoms are noted in the Oct. *Ophth. Record.*—Ed.]

77. Thirteen Years' Experience with Diphtheria.—Curtius is an ardent advocate of preventive serum treatment, and mentions among other points the comparatively slight disturbance of the general health at first in comparison with that observed in tonsillitis. He also refers to the confluent character of the exudation, which very seldom occurs in dots, but usually in masses. He orders the children to spit into a dish of water and in this way has often detected scraps of false membrane as the first sign of diphtheria. His experience has confirmed the great value of local applications of Löffler's solution applied on cotton and pressed into the spot after removal of the membrane, holding it in contact for ten seconds. The formula is menthol 2.5 gm.; dissolve in toluol 9 gm., alcohol 15 gm. and liq. ferri sesquichlor. 1 gm. He has found this very effectual even when serum treatment was impossible for any reason, but insists on the importance of removing the membrane before applying it. If the child will not open its mouth he pushes the lower lip over the lower teeth to keep the mouth open. He regards gargles as useful merely for the mechanical removing of bacteria and remarks that clear water is as good for this purpose as an antiseptic. He urges an abundance of nourishing food and strict cleanliness, as repetition of the infection is not impossible. As a homely measure to supply steam when the child is breathing with difficulty he throws a sheet over the bed, held up by barrel hoops or something of the kind, and generates steam by pouring water over a hot brick. This moist heat softens the rigid infiltrated tissues in the throat and stimulates the circulation in the parts, possibly also loosening the membranes.

79. Tuberculosis Infection By Way of Intestines.—Sorger states that he has fed dogs for months with tuberculous sputa mixed with their food, but always with negative results.

81. Absorption of Lime by the Tissues in Rachitis.—Pfaundler argues to prove that newly formed osteoid tissue does not possess any special affinity for the anorganic constituents of the true bone formed later. This affinity develops in the later course of the transformation of the osteoid tissue. A certain form of heteroplasia of the osteoid tissue is thus necessary for calcification, and it is further possible that under the influence of hydrolytic processes the elements of the osteoid tissue become able to take up lime. In calcification, acid radicals, and especially phosphoric acid, are found as well as lime. If these premises are correct the essence of rachitis may prove to be a defective transformation of the elements of the osteoid tissue into lime catchers, an inhibition of the normal biochemical tissue transformations, possibly in the line of autolytic processes. The unmistakable benefit derived from phosphorus in rachitis may be due to its favoring the hydrolytic splitting of the nitrogenous tissue-forming elements.

84. Cerebral Bladder Disturbances.—Friedmann had occasion to observe a boy of 9 who was affected with an almost isolated disturbance in the innervation of the bladder in consequence of a brick falling from a height on his head. The disturbances continued a long time, but finally subsided. From study of the case he assumes that the brick must have injured a point in the brain which serves as a center for the innervation of the bladder. The spot was close to the edge of the posterior central convolution, directly adjacent to the upper parietal lobule. The fact that the hand and arm were not affected to any extent shows that the center in question must be small and circumscribed, as the centers for the hand and arm are in close proximity to the point of the injury.

86. Aspirating Pipette.—In drawing blood for examination Ebstein uses a Pravaz syringe instead of a rubber bulb to aspirate the blood, applying the syringe to the end of a short, stiff rubber tube attached to the pipette. He remarks that we do not realize the inconveniences of the present methods of aspirating with a bulb until they are abolished by use of the syringe.

Therapie der Gegenwart, Berlin.

Last indexed page 941.

88 (No. 7.) *Fluids in Diet of Heart Disease. F. Kraus.—Ueber die dietetische Behandlung des Wasserhaushaltes bei der Behandlung Herzkranker.
89 *Buttermilk in Infant Feeding. E. Kobrab.—Buttermilch als Säuglingsnährung in der poliklinische Praxis.
90 (No. 8.) *Ueber die specifische Behandlung des Morbus Basedowii. Burghart and Blumenthal.
91 Review of Modern Methods of Outlining the Heart. de la Camp.—Zur Kritik der sogen. modernen Methoden der Herzgrössenbestimmung.
92 *Ueber Akromegalie. L. Huismanns.
93 *Casuistische Beitrag zur Eisenlichtbehandlung (Treatment with Iron Light). E. Clasen (Hamburg).

88. Fluids in Diet in Heart Disease.—Kraus makes a practice of occasionally restricting the intake of fluids at periodical intervals. If the subject is accustomed to take about 1500 c.c. he limits him to 1200, or even 1000 c.c., returning then to 1500 c.c. Many persons adapt themselves without trouble to as little as 1000 c.c. Valvular defects are not benefited to such an extent by this dietetic restriction of the fluids as cases of chronic insufficiency of the heart, especially those in which the compensation is just beginning to be inadequate.

89. Buttermilk in Infant Feeding.—Kobrak's experience with 66 cases at Neumann's clinic at Berlin impels him to recommend buttermilk as a valuable aid for the feeding of infants of the class that apply to the dispensary. It is especially indicated for weakly infants, the prematurely born and those with chronic atrophy and in moderate or mild cases of intestinal catarrh. Also when there is much vomiting.

90. Specific Treatment of Exophthalmic Goiter.—Burghart describes a preparation of condensed milk from thyroidectomized goats. It is a sweetish powder and is sold under the name of "rodagen." He has found it very beneficial in the treatment of exophthalmic goiter, either by the mouth or by subcutaneous injection. In 2 of the 10 cases he reports the eyes receded until the patients now consider themselves cured. He mentions that the goats lost their intelligent expression and became clumsy; their hair fell out and grew in again rougher than before. The secretion of milk gradually ceased, and the general appearance of the animals after the removal of the thyroid unmistakably suggested that of myxedema in man. One goat succumbed to the progress of the symptoms in-

duced by the thyroidectomy. The therapeutic use of the milk from these animals has an undoubted effect in neutralizing the toxin elaborated by the thyroid gland in abnormal conditions, but, of course, it can not influence already established anatomic changes. The serum and milk from the thyroidectomized animals have an unmistakable influence on the heart action and must be used with caution on this account, especially when the heart is already impaired. In all other respects the serum and rodagen proved harmless, even as much as 50 gm. a day, with no other effects than the more or less rapid retrogression of the subjective and objective symptoms. Some of his patients took 5 gm. a day; others up to 30 gm. In conclusion he announces as an established fact that treatment with the milk or serum of thyroidectomized animals has a favorable influence in a large proportion of cases of exophthalmic goiter.

92. **Acromegaly.**—Huismann ascribes this affection to a lack of hypophysis functioning, the result of a primary or secondary lesion in the hypophysis. It may be due to malignant disease or hypoplasia or hyperplasia, or may result from a primary chronic affection of the blood impairing the organ secondarily. Organ treatment will certainly benefit unless irreparable changes have already been established.

93. **The "Iron Light" in Radiotherapy.**—Clasen has been favorably impressed with the action of the iron lamp, especially in acne and sycosis. Its effects are more superficial than those realized with the Finsen light, but his experience with 17 patients has shown that the new lamp, being within the reach of every practitioner, can not fail to realize great progress in the treatment of cutaneous affections. For acne in particular it is the most convenient and agreeable method of treatment yet devised. In many cases in which the acne had persisted for years the skin healed over smooth after a few applications. He had only a single failure in his 14 cases, and this one patient did not complete the course recommended. There are no subjective sensations from the application of the iron light. (It has been described in these columns, xl, page 1112, paragraph 53.)

Gazzetta degli Ospedali, Milan.

Last indexed page 891.

94 (XXIV, 86.) Contributo clinico alla chirurgia della laringe e della trachea. T. Scarrone.
95 *Cura degli angiomi senza operazione. A. Frattini.
96 (No. 89.) Contributo alla tabe spasmodica famigliare. A. Perugia.
97 *Liberation of Iodin in Contact with Animal Tissues. O. Spadoni.—Sulla liberazione dell' iodio a contatto dei tessuti animali.
98 *La digitale ad alta dose nella cura della pneumonite lobare. G. Bragagnolo.
99 (No. 92.) *Chylous and Chyliform Effusions. A. Cipollina.—Versamenti chilosi e chiliformi.
100 Sulla enteroanastomosi. A. Santucci.
101 *La cura chirurgica della nevralgia del trigemino. G. Baroni.
102 *Sull' uso di una antitossina per via gastrica. F. Figari.
103 (No. 95.) *Leucocitosi consecutiva ad iniezioni endovenose di sublimato. G. Memmi.
104 I problemi dell' innesto (of transplantation of living tissues). M. Segale.
105 Industrial Insurance and Tuberculous Hip Disease. E. Curto.—Infortunio sul lavoro e coxite tub.
106 Di una nuova siringa a doppia corrente. G. Baroni (Lucignano).
107 (No. 98.) La sutura ossea della frattura della rotula. T. Scarrone.
108 Unusual Manifestations of Syphilis. Secchi.—Casi non comuni di clinica sifilopatica. (Commenced in No. 89.)
109 *L' opo-terapie soprarenale nel trattamento dell' atonia vescicale. G. Moresco.

95. **Non-Operative Treatment of Angiomata.**—Frattini has invariably been able to cure cutaneous angiomata by painting them with a 6 per cent. solution of sublimate in collodion. He applies a second coat at once as soon as the first is dry, and repeats the procedure every third day. After the second or third repetition the angioma is cast off with the collodion, and nothing is left but a smooth surface, the color of the surrounding skin. In one case the angioma projected 3 cm. and was 4 cm. in diameter, but the cure was as prompt and perfect as in the other cases. No pains nor inconveniences were noted in any instance and the cures have been permanent with most satisfactory cosmetic results.

97. **Liberation of Iodin in Contact with Animal Tissues.**—Spadoni shows that iodin is liberated on contact with the tissues, but is taken up by them and is not eliminated at once. The lack of elimination must not be construed as evidence that the iodin has not been liberated.

98. **Digitalis as Specific for Pneumonia.**—Bragagnolo regards digitalis in large doses as an absolute specific for lobar pneumonia. Only 4 patients died in 54 treated in this way, and the deaths in these cases could be ascribed to other lesions. It reduces the temperature, slows the pulse and, if given early enough, will abort the disease. He follows Maragliano's technic, giving an infusion of 4 gm. of digitalis leaves by percolation with 200 gm. water, adding 100 gm. of licorice water and 2 gm. of anisated water of ammonia, the whole amount to be taken in the twenty-four hours. The benefit is apparent after four to six doses, and his experience has confirmed that of Maragliano, who says that if the pulse is not slowed in forty-eight hours by this medication the patient is doomed. The crisis occurred at the fourth day in 2; fifth day in 36; sixth day in 5; seventh day in 5; and the eighth day in 2. He resorted to venesection in a few cases toward the close of the disease, considering it of no use in the early stages.

99. **Chylous and Chyliform Effusions.**—Cipollina has always found that patients with chylous ascites did not long survive, but died in progressive cachexia. The effusion is profuse and may be accompanied by fever and signs of inflammation of the peritoneum. He describes a case of a chyliform effusion found in the pleura on the side which had been the seat of severe pleurisy thirty years before. He assumes that the effusion had remained encapsulated during this long period with granulo-fatty degeneration.

101. **Trigeminal Neuralgia.**—Baroni describes 2 cases of intractable trigeminal neuralgia cured to date by stretching the nerve at the periphery, breaking it off as high up as possible. One of his patients had had syphilis, malaria and trauma affecting the region. He believes that the percentage of cures after a simple peripheral operation of this kind is higher than that from the more serious interventions on the ganglia.

102. **Antitoxin Treatment by the Mouth.**—Figari reports extensive experiments with rabbits, dogs and asses treated with Maragliano's tuberculosis antitoxin by the mouth. In all the animals marked antitoxic, agglutinating and resisting powers were conferred on the animals by this means. The results suggest that the production of specific defensive substances is not the property of any given species, but is the expression of the general reaction of the animal organism. Persons and animals taking antitoxin by the mouth can not be regarded as immunized, but they are evidently exceptionally well guarded against tuberculosis infection by an unusual supply of Nature's protective substances.

103. **Leucocytosis Consecutive to Intravenous Sublimate Injections.**—Memmi reports a number of experiences from Patella's clinic at Siena, showing that intravenous injection of 2 to 4 mgm. of sublimate induced a moderate hyperleucocytosis, thus proving a valuable aid to the natural defenses. He has examined several patients a year after the injections and was never able to detect any disturbances nor induration of the vein. The maximum of the leucocyte reaction was obtained four to six hours after the injection; by the eighteenth to the twenty-fourth hour the leucocytes had returned to the original number.

109. **Suprarenal Treatment of Atony of the Bladder.**—Moresco was inspired by Vassale's success in the treatment of atony of the stomach with suprarenal extract, to apply it also in paralytic conditions of the bladder. He has found it equally effective in this condition, and reports that 2 patients were thus completely relieved and cured of retention from paralysis of the detrusor urinæ. He used ordinary adrenalin, which he states is much less powerful than Vassale's paraganglin, but he was unable to procure the latter at the time. He injected 150 c.c. every morning of a 1 per 50,000 adrenalin solution, leaving it in the bladder for an hour or more. After determining the tolerance of the bladder for this solution he increased the strength to 1 per 25,000. After four and six injections there were indications of spontaneous micturition,

and by the end of the second week the bladder could be spontaneously almost completely emptied, which had been impossible for a long time.

Riforma Medica, Palermo.

110 (XIX, No. 36.) *L' analgesia cocaino-adrenalinica in chirurgia generale. F. Gangitano.
111 Sopra 3 operazione per cancro dell' utero, dello stomaco e del rene. C. Caliari.
112 (No. 37.) *La fisostigmina nella terapia dell' atonia intestinale. G. Curlo.
113 The Pancreas in Ordinary Cirrhosis of the Liver. L. D'Amato (Cardarelli's clinic, Naples).—Il pancreas nella cirrosi volgare del fegato.
114 *Sulla cura della eresipela facciale. F. Sarcinelli.

110. **Cocain-Adrenalin Analgesia.**—Gangitano reports from Bologna that he has used the combination of cocain and adrenalin in more than 100 operations and has never had postoperative hemorrhage nor noted any inconveniences. Among the operations were one for resection of the upper jaw; ablation of a large goiter; a Roux gastroenterostomy and a total laryngectomy. He mentions the salient points in each case, calling special attention to the advantages of the method in 2 cases of bilateral Bassini in a subject with grave heart disease, and a total hysterectomy in an obese woman with an uncompensated cardiac defect. He found that it was possible to dilate strictures of the urethra, previously impermeable, after the cocain-adrenalin application, rendering the projected operation unnecessary. He agrees with King that postoperative hemorrhage is prevented by the formation of a clot during the period of vasoconstriction. He used a mixture of 9 c.c. of a .5 per cent. solution of cocain with 1 c.c. of a 1 per 1000 solution of adrenalin hydrochlorate.

112. **Physostigmin in Intestinal Atony.**—Curlo's communication issues from Maragliano's clinic at Genoa and is based on both experimental research and 18 clinical cases. He groups the latter according to the negative or positive results obtained and thus demonstrates that the drug finds its indications in coprostasis from intestinal atony. It stimulates and induces spasmodic action and increases peristalsis. It is therefore contraindicated in spastic conditions, in intestinal catarrh and in mucomembranous enterocolitis. As it increases the tonicity of the intestinal wall it proves a valuable aid in combating meteorism. The maximal daily dose, free from symptoms of intoxication, is 4 to 6 milligrams. The standard dose is 2 or 3 milligrams. The signs of intolerance are myosis of the pupils and sialorrhea. His experience seems to show that the best mode of administration is the salicylate of physostigmin in pills.

114. **Treatment of Erysipelas.**—Sarcinelli has found that erysipelas of the face healed rapidly under application of a thin cotton face mask impregnated with .25 to .5 per 1000 solution of sublimate, substituted every two hours by another similar mask impregnated with a 3 per 1000 salicylic solution. This alternation of the masks kept the surface moist, while a too energetic action on the part of the sublimate was guarded against. If blisters formed he applied topically to them either vaselin or an ichthyol salve, before putting on the mask. This method of treatment not only benefited the local lesions but reduced the general infection, the fever rapidly subsiding, and no further medication being needed except possibly some heart tonic.

Medizinskoe Obozryenie, Moscow.

Last indexed page 818.

115 (LIX, No. 4.) *3 slutchaya bronchialnoi asthmy u dyetei (in children). E. Y. Stolkind.
116 Linear Cutaneous Affections. M. A. Tchlenoff.—K kazuistikye systematizirovannykh rodimykh pyaten, etc.
117 (No. 5.) *Syphilis and Renal Surgery. M. Margulies.—Syphilis i potchetchnaya chirurgiya.
118 House Epidemics of Syphilis. P. Jordan.—O domovykh epidemiakh syphilsa.
119 K voprosu o selesenotchnoi anemii (anemia splenica). S. M. Tsipkin.
120 *Treatment of Erysipelas with Potassium Permanganate. E. I. Martzinovski. — O lyetchenii rozhe margantzovokislym kalliem.

115. **Bronchial Asthma in Children.**—Stolkind has had occasion to observe 3 cases of typical bronchial asthma in children. In one instance it developed consecutive to a severe attack of la grippe. Eosinophile cells, Curschmann spirilla and crystals were found in the sputa. The patient was a boy of 8. The attacks occurred mostly at night and lasted for an hour and more. In the second case the asthma vanished after adenoid vegetations were removed. The third patient was a boy of 14, who had suffered from the asthma for four years. Tuberculosis was noted in other members of the family. The asthma was evidently of reflex origin in all of the cases.

117. **Syphilis and Surgery of Kidneys.**—Margulies describes a case of inflammation in and around the left kidney which was opened up on account of the severe chills and fever. The syphilitic nature of the trouble was seen at once and all symptoms vanished under specific treatment. The patient was a woman of 26.

120. **Treatment of Erysipelas with Potassium Permanganate.**—A compress moistened with a 1 per 1000 solution is applied to the erysipelatous patches. The results have been very favorable in Martzinovski's experience in 7 cases thus treated.

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

The Neurological Practice of Medicine. A Cursory Course of Selected Lectures in Neurology, Neuriatry, Psychology and Psychiatry. Applicable to General and Special Practice. With 177 Illustrations. After the Author's Class-Room Methods as a Teacher of Students. Designed for Students and General Practitioners of Medicine and Surgery. By Charles H. Hughes, M.D., President of the Faculty and Professor of Neurology, Psychiatry and Electrotherapy, Barnes Medical College. Cloth. Pp. 417. Price, $3.00. St. Louis: Hughes & Co.

Functional Diagnosis of Kidney Disease. With Especial Reference to Renal Surgery. Clinical Experimental Investigations. By Dr. Leopold Casper (Privatdocent an der Universität) and Dr. Paul Friederich Richter (Assistant der III Med. Klinik in Berlin). Translated by Dr. Robert C. Bryan, Adjunct Professor Genito-Urinary Diseases, University Medical College, Richmond, Va., and Dr. Henry L. Sanford, Resident Surgeon Lakeside Hospital, Cleveland. Cloth. Pp. 233. Price, $1.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

Electro-Static Modes of Application, Therapeutics and the Uses of the Roentgen Ray. By William Benham Snow, M.D., Professor of Electro-Therapeutics and Radiotherapy in the New York School of Physical Therapeutics. Second Edition, Revised and Enlarged. Contains More Than 100 Illustrations, Including Ten Full-page Half-tones, Showing the Various Methods of Posturing and Treating Conditions. Cloth. Pp. 302. Price, $3.00. New York: A. L. Chatterton & Co.

Surgery, Its Theory and Practice. By William Johnson Walsham, F.R.C.S. Eng., M.B. and C.M. Aberd., Surgeon, Formerly Lecturer on Surgery and on Anatomy, St. Bartholomew's Hospital. Eighth Edition. With 622 Illustrations, Including 20 Skiagram Plates. By Walter George Spencer, M.S., M.B. Lond., F.R.C.S. Eng., Surgeon to the Westminster Hospital. Cloth. Pp. 1,227. Price, $4.50 net. Philadelphia: P. Blakiston's Son & Co. 1903.

Proceedings of the Connecticut Medical Society, 1903. One Hundred and Eleventh Annual Convention, Held at Hartford, May 27 and 28. Cloth. Pp. 465. Publication Committee: Gould A. Shelton, M.D.; Samuel B. St. John, M.D., and N. E. Wordin, M.D. Published by the Society. 1903.

Adeno-Myome des Uterus. Von Thomas S. Cullen, Hülfsprofessor der Gynäkologie an der Johns Hopkins-Universität. Mit 45 Abbildungen im Text. Half Cloth. Pp. 91. Berlin: Verlag von August Hirschwald. 1903.

The Public Service.

Army Changes.

Movements of Officers of the Medical Department, U. S. Army, under orders from the Adjutant-General's Office, Washington, D. C., for the week ending Saturday, Sept. 26, 1903:

Amador, R. A., contract surgeon, will proceed, on the expiration of the leave granted him, to his home, New York City, for annulment of contract.

Darnall, Carl R., captain and asst.-surgeon, is relieved from duty in the office of the Surgeon-General of the Army, and will assume charge of the field medical supply depot in Washington, D. C., in addition to his duties in connection with the Army Medical School and as recorder of the Army medical examining board.

Fuller, Leigh A., captain and asst.-surgeon, is granted leave for fourteen days, on the expiration of which he will proceed to Fort Bayard and report at the U. S. General Hospital for duty.

Gorgas, William C., colonel and assistant surgeon-general, now on temporary duty as chief surgeon, Department of the East, will report for permanent duty as chief surgeon.

Gray, William W., major-surgeon, is detailed to represent the Medical Department of the Army at the annual meeting of the Tri-State Medical Society of Alabama, Georgia and Tennessee, to be held at Atlanta, Ga., Oct. 13 to 15, 1903.

Kulp, John S., captain and asst.-surgeon, is granted leave of absence for four months from about October 15.

Lippincott, Henry, colonel and assistant surgeon-general, by operation of law, under the provisions of the act of Congress approved June 30, 1882, is retired from active service. Colonel Lippincott will proceed to his home.

Perley, Harry O., major-surgeon, on the expiration of his present leave of absence, is directed to proceed to Fort Logan for duty.

Rich, Edwin W., first lieut. and asst.-surgeon, on his relief from duty at Honolulu, H. T., will proceed to Manila, P. I.

Torney, George H., lieutenant-colonel and deputy surgeon-general, now on sick leave at San Francisco, is relieved from further duty in the Division of the Philippines, and will assume charge of the medical supply depot at San Francisco, relieving Lieut.-Colonel Louis M. Maus, deputy surgeon-general. Lieut.-Colonel Maus will proceed to Fort Riley for duty.

Wells, George M., major-surgeon, is relieved from duty at Fort Bayard, to take effect on the arrival at that place of Captain Leigh A. Fuller, asst.-surgeon, and will then proceed to San Francisco and report for transportation to the Philippine Islands.

Navy Changes.

Changes in the Medical Corps of the Navy for the week ending Oct. 3, 1903:

Pharmacist S. W. Douglas, detached from Naval Proving Ground, Indian Head, Md., and ordered to the Navy Yard, Portsmouth, N. H.

Asst.-Surgeon W. S. Pugh, Jr., appointed an assistant surgeon, with the rank of lieutenant, junior grade, from Sept. 23, 1903.

Asst.-Surgeon M. V. Stone, when discharged from treatment at the Naval Hospital, New York, ordered home and granted sick leave until December 31.

Surgeon S. H. Griffith, detached from the Marine Barracks, Washington, D. C., and ordered to the *Minneapolis* and to duty as fleet surgeon of the Atlantic Training Squadron.

Asst.-Surgeon R. B. Williams, detached from the First Torpedo Flotilla and ordered to the Naval Hospital, Norfolk, Va.

Asst.-Surgeon F. M. Bogan, detached from Navy Yard, Washington, D. C., and ordered to the *Chauncey* for duty with the First Torpedo Flotilla.

Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospial Service for the fourteen days ended Oct. 1, 1903:

Assistant Surgeon-General George Purviance, granted leave of absence for ten days from September 21.

Assistant Surgeon-General H. D. Geddings, to proceed to Paris, France, to represent the United States at an International Sanitary Conference October 10, and, on its adjournment, to proceed to Berlin and Frankfort, Germany, and London, England, for special temporary duty.

Surgeon R. D. Murray, to proceed to New Orleans, and thence to Laredo, Texas, for special temporary duty. Reassigned to duty at Key West, Fla., effective May 15.

Surgeon Preston H. Bailhache, granted five days' leave of absence from Sept. 5, 1903, under paragraph 189 of the Regulations. To proceed to Trenton and Perth Amboy, N. J., for special temporary duty.

Surgeon D. A. Carmichael, relieved from temporary duty in the Hygienic Laboratory, and directed to rejoin his station at Vineyard Haven, Mass.

Surgeon C. T. Peckham, to proceed to Boston for special temporary duty. Bureau order of Sept. 28, 1903, directing him to proceed to Boston for special temporary duty, revoked.

Surgeon S. D. Brooks, to proceed to Savannah quarantine as inspector.

Surgeon J. H. White, granted extension of leave of absence for ten days.

Surgeon G. M. Guiteras, to proceed to Laredo, Texas, for special temporary duty.

P. A. Surgeon M. J. Rosenau, reassigned as director of the Hygienic Laboratory, effective April 27.

P. A. Surgeon C. H. Gardner, to proceed to Boston for special temporary duty.

P. A. Surgeon H. S. Cumming, to proceed to San Francisco for special temporary duty.

P. A. Surgeon H. S. Mathewson, granted leave of absence for forty-five days from September 22.

P. A. Surgeon R. H. von Ezdorf, to proceed to Laredo, Texas, and report to Surgeon G. M. Guiteras for special temporary duty.

P. A. Surgeon L. L. Lumsden, relieved from duty at Vineyard Haven, Mass.; directed to proceed to New Orleans and report to medical officer in command for duty and assignment to quarters.

P. A. Surgeon M. J. White, three days' leave of absence, granted by Bureau telegram of August 23, revoked.

Asst.-Surgeon W. C. Hobdy, granted leave of absence for seven days from Aug. 22, 1903, under paragraph 191 of the Regulations.

Asst.-Surgeon C. W. Vogel, granted leave of absence for two days from Sept. 17, 1903, under paragraph 191 of the Regulations.

Asst.-Surgeon R. E. Ebersole, to proceed to New Orleans and report to medical officer in command. To proceed to Houston, Texas, for special temporary duty.

Asst.-Surgeon E. M. Steger, to proceed to New York and report to Surgeon G. W. Stoner, Immigration Depot, for duty.

A. A. Surgeon G. H. Altree, granted leave of absence for eighteen days on account of sickness.

A. A. Surgeon Hugh Burford, granted leave of absence for thirty days from September 20.

A. A. Surgeon D. M. Echemendia, granted extension of leave of absence, on account of sickness, for seven days from September 3.

A. A. Surgeon E. E. Hallett, granted leave of absence for three days from September 26.

A. A. Surgeon W. A. Weldon, granted leave of absence for seven days from Aug. 31, 1903, under paragraph 191 of the Regulations.

Pharmacist J. Achenbach, granted seven days' leave of absence from September 9, 1903, under paragraph 210 of the Regulations.

Pharmacist F. S. Goodman, granted twenty-three days' leave of absence from September 10. To proceed to Washington, D. C., for special temporary duty.

Pharmacist F. R. Hanrath, granted leave of absence for twenty-one days from September 7.

Pharmacist S. W. Richardson, granted ten days' leave of absence from September 20.

Pharmacist C. H. Woods, to proceed to St. Louis, and report to medical officer in command for temporary duty.

Pharmacist M. Walerius, to proceed to Laredo, Texas, and report to Surgeon G. M. Guiteras for special temporary duty.

Pharmacist E. B. Scott, granted leave of absence for thirty days from September 5.

Pharmacist J. E. Beck, granted leave of absence for thirty days from September 14.

Pharmacist F. A. Southard, granted leave of absence for three days from Sept. 28, 1903, under paragraph 210 of the Regulations.

Pharmacist G. A. Morris, granted leave of absence for twenty days from September 14.

Pharmacist C. Stier, to proceed to Key West, Fla., and report to acting assistant surgeon in temporary charge for duty.

APPOINTMENT.

Edward M. Steger, of Texas, commissioned as assistant surgeon (recess) in the Public Health and Marine-Hospital Service, Sept. 4, 1903.

BOARDS CONVENED.

Board convened at Washington, D. C., Sept. 25, 1903, for the purpose of making physical examinations of candidates for appointment in the Revenue-Cutter Service. Detail for the board: Assistant Surgeon-General W. J. Pettus, chairman; Asst.-Surgeon A. J. McLaughlin, recorder.

Board convened at the Purveying Depot, New York, Oct. 5, 1903, for the physical examination of officers of the Revenue-Cutter Service. Detail for the board: Surgeon H. W. Sawtelle, chairman; P. A. Surgeon A. C. Smith, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Oct. 3, 1903:

SMALLPOX—UNITED STATES.

Alabama: Mobile, Sept. 19-26, 4 cases.
California: Los Angeles, Sept. 12-19, 2 cases.
Illinois: Belleville, Sept. 19-26, 3 cases; Chicago, Sept. 19-26, 2 cases; Danville, Sept. 19-26, 1 case.
Maine: Oldtown, Sept. 19-26, 8 cases.
Maryland: Baltimore, Sept. 19-26, 1 case.
Massachusetts: Fall River, Sept. 19-26, 2 cases.
Michigan: Detroit, Sept. 19-26, 1 case; Port Huron, Sept. 19-26, 3 cases.
Minnesota: Crow Wing county, Sept. 14-21, 23 cases; Stearns county, Sept. 14-21, 3 cases; Stevens county, Sept. 14-21, 1 case.
Mississippi: Natchez, Sept. 13-20, 1 case.
New York: Niagara Falls, Sept. 19-26, 2 cases.
Ohio: Cincinnati, Sept. 18-25, 1 case; Cleveland, Sept. 19-26, 1 case.
Pennsylvania: Altoona, Sept. 19-26, 1 case; Butler, Sept. 12-19, 1 case.
South Carolina: Charleston, Sept. 19-26, 2 cases.
Tennessee: Memphis, Sept. 19-26, 3 cases.
Wisconsin: Milwaukee, Sept. 19-26, 2 cases.

SMALLPOX—INSULAR.

Philippines: Manila, Aug. 1-15, 1 case, 1 death.

SMALLPOX—FOREIGN.

Austria: Prague, Sept. 5-12, 1 case.
Belgium: Brussels, Sept. 5-12, 1 death.
Brazil: Pernambuco, Aug. 1-15, 9 deaths; Rio de Janeiro, Aug. 23-30, 46 cases, 20 deaths.
China: Shanghai, Aug. 8-15, 2 deaths.
Colombia: Barranquilla, Sept. 6-13, 1 death.
Great Britain: Bradford, May 30-Sept. 12, 155 cases, 9 deaths; Dundee, Sept. 5-12, 3 cases; London, Sept. 5-12, 9 cases; Newcastle-on-Tyne, Sept. 5-12, 5 cases; South Shields, Sept. 5-12, 1 case.
India: Bombay, Aug. 24-Sept. 1, 3 deaths.
Netherlands: Amsterdam, Sept. 12-19, 5 cases.
Russia: Moscow, Aug. 29-Sept. 5, 1 case, 1 death; Odessa, Aug 29-Sept. 5, 5 cases; Warsaw, Aug. 22-29, 1 death.
Turkey: Smyrna, Aug. 31-Sept. 6, 40 deaths.

YELLOW FEVER—UNITED STATES.

Texas: Laredo, Sept. 24-28, 13 cases, 3 deaths.

YELLOW FEVER—FOREIGN.

Colombia: Panama, Sept. 14-21, 2 cases, 1 death.
Mexico: Vera Cruz, Sept. 12-19, 35 cases, 10 deaths.
Venezuela: Cagua, Sept. 19, epidemic; San Felipe, Sept. 19, epidemic.

CHOLERA—INSULAR.

Philippines: Manila, Aug. 1-15, 32 cases, 24 deaths; provinces, Aug. 1-15, 1,991 cases, 1,492 deaths.

CHOLERA—FOREIGN.

China: Shanghai, Aug. 8-15, 2 deaths.
India: Calcutta, Aug. 15-29, 18 deaths; Madras, Aug. 15-22, 1 death.

PLAGUE—FOREIGN.

Africa: Cape Colony, July 26-Aug. 8, 1 case.
Brazil: Rio de Janeiro, Aug. 23-30, 19 cases, 10 deaths.
China: Hongkong, Aug. 8-15, 13 cases, 11 deaths.
Egypt: Alexandria, Aug. 22-28, 7 cases, 6 deaths; Damiette, Aug. 22-28, 7 cases, 5 deaths.
India: Bombay, Aug. 24-Sept. 1, 79 deaths; Calcutta, Aug. 21-29, 29 deaths.
New Caledonia: Aug. 29, 23 cases, 17 deaths.